

HISTORY
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

INSTITUTED SEPTEMBER 22, 1831

"MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CÆLUM"

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BERWICKSHIRE NATURALISTS' CLUB

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CLUB NOTES

In 1985 the Club met as follows:—

22nd May. Alnwick Church and Alnwick Castle.

13th June. Stevenson House and Garden. Haddington: St. Mary's Church, Haddington House, St. Mary's Pleasance and Herb Garden, Jane Welsh Carlyle Museum and Garden.

17th July. Craigmillar Castle. The Royal Observatory, Edinburgh.

15th August. Belsay Hall, Castle and Gardens. Bolam. Shortflatt Tower and Harnham Hall.

11th September. Kelso Abbey. Floors Castle.

18th October. Annual Meeting, Berwick.

Extra Meeting: 29th April. Burrell Collection, Glasgow.

PROCEEDINGS
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

LANGTON PARISH

*being the Anniversary Address delivered by Mrs. Kathleen
Barbara Fleming, President of the Club, on 18th October, 1985*

From Duns, the nearest boundary of Langton Parish is a mile south-west on the road to Greenlaw, a small field's breadth beyond the house called Hardens Way where we live. Along the foot of that field runs the Bluidy Burn which got its name when the people of old time Dunse stampeded an invading English force into the bog by the Burn and massacred them there. At the farthest corner of the field the Bluidy Burn joins the Pouterlynie Burn which forms part of the Parish boundary, and the main road crosses into the Parish over Pouterlynie Bridge. Continuing through the Parish south west towards Greenlaw, the road approximately demarcates the limit of the rich arable land stretching northwards from the Tweed, through the Merse of Berwick.

The Parish is entirely agricultural and one of its features is the diversity of the land within its boundaries, which encompass an area extending at its extremes only $3\frac{1}{2}$ miles from east to west and $4\frac{1}{2}$ miles from north to south. South of the road are the arable farms of Langton Mill, Middlefield, Ladyflat, Woodend and part of Choicelee. North of the road the land rises into the Lammermuirs with the farms of Hardens, Raecleughhead, Langtonlees and more of the Choicelee land, still mainly on the southern slope. Further north the farm of Stobswood lies among the hills, and Forestry Commission plantings occupy the steepest land in the north east of the Parish along Langton Edge.

The lowest land in the Parish is around 300 feet above sea level. The highest point, where the old war-time radar masts are located on top of Hardens Hill, is 1166 feet. This range of about 850 feet in altitude may not seem great, but in these northern latitudes it is sufficient to cause a marked difference in climate. On winter mornings it is commonplace to see from our north-facing windows that precipitation, which fell as rain on the lower ground, fell as sleet or snow down to about the 600 foot contour on Hardens Farm. And in more wintry weather, two miles away on Hardens Hill the road to Longformacus is often blocked by snow, when very little has fallen at the foot of the hill.

Depth and fertility of soils also come into the picture. The deep soils of the arable land give way to less than one inch of poor topsoil under the heather on the hills. Place names help to underline the contrast; for example Boglands Plantation, between Ladyflat and Woodend, contrasting with Hell's Cleugh, which is a deep and wild ravine behind Hardens Hill. The total effect is that there is a range from totally arable farming on the low land, through stock farming, with some arable on the lower slopes, to Blackface sheep in the heather which they share with grouse on the highest ground.

Turning back to Pouterlynne Bridge on the Duns to Greenlaw road, the stream rises as the Wellrig Burn two miles upstream on the watershed of Langton Edge in the north easternmost corner of the Parish, in an area of afforested land known as Young Jeanie's Wood. Over the Parish boundary is Jeanie's Wood. Who were Jeanie and Young Jeanie? Defining the eastern boundary of the Parish, the Wellrig Burn gathers other small streams from Langton Edge on its way downhill and once fed the reservoir which supplied Duns with water. Crossing the Duns Golf Course it passes Wellrig, now reduced to ivy grown walls, on the edge of the Duns to Longformacus road.

By the bridge just inside the Parish boundary is Pouterlany which is said to be a corruption of the name Peter Lany. Originally a small row of cottages occupied by Flemish weavers, the site is still occupied by a modern house which encompasses some of the original structure. Just to the west, on the opposite side of the main road, is Scotston, built to house linen weavers brought from the west of Scotland. Still occupied today, Scotston retains part of its old red tile roof, and stonecarved weavers' knots are at each corner of the gables.

Half a mile downstream, beyond the confluence with the

Bluidy Burn, the linen woven at Scotston was bleached at Bankhead. Remnants of the ponds and sluices can still be seen in the stream bed, also the old channel of the mill lade which led water downstream to drive Langton Mill, now a small farm, but then primarily a mill with some adjoining land.

Here is an example of how the same water was often used repeatedly to provide power to drive waterwheels. Just downstream from Langton Mill, water from the Pouterlynie Burn was led off across two fields to drive the water wheel at Duns Mill. From Duns Mill this water was released into the Langton Burn which again provided water to drive Putton Mill a little further downstream. In cases like these, early use of water power is readily visible, but it was also used in locations apparently well above any serviceable stream. Middlefield Farm just to the south is such a case. Standing well above the nearest stream, it was supplied by a long lade buried deep underground which brought water from some way upstream under two fields of arable land, to a waterwheel located underneath the farm buildings.

Below Langton Mill the Parish boundary is marked by the Langton Burn, which almost immediately flows under the disused track of the railway line which crosses Middlefield Farm and which once linked the main East Coast railway line at Reston with the South West of Scotland. It served all the small towns and many villages along the way. There were for example stations at Chirnside, Edrom, Duns, Marchmont and Greenlaw. Certainly it was not an express service, but you could commute from Duns to Edinburgh. This line was not a victim of the Beeching axe but of the famous flood of 1948, which washed away so many bridges in the Borders, including one on this railway, which was too expensive to repair. Last year in Bogota in Colombia we met a lady from Dumfriesshire, who as a girl travelled regularly all the way from west to east, to attend her school which had been evacuated to Ayton during the Second World War.

Although it is nearly forty years since the through line was broken, it is less than twenty years since trains ceased to come into Duns from Reston. In its time, the railway was the main source of transport for the farms. Livestock were driven up to several miles to the nearest station, in this case Duns or Marchmont, for shipment to markets as far away as Edinburgh or beyond. By the same route, store and breeding stock were brought into the area from even farther afield. Similarly farm produce was carted to the stations for

outward shipment, and other farm supplies came in by the same route.

From the Langton Burn, the boundary turns south following the eastern boundary of Middlefield Farm till it strikes the Howe Burn, whence it turns west following the Howe Burn, the Kirk Burn and the Back Burn up stream, finally crossing the Duns to Greenlaw road at the Backburn Bridge, close to where a few surviving houses mark what was once the site of Polwarth village in the neighbouring parish.

All along this southern side of the parish between the boundary burns and the main road to the north is friendly arable land, intensively farmed. The aspect changes and quickly becomes bleaker as the boundary begins to swing north beyond the Backburn Bridge and again picks up the Langton Burn as boundary by Polwarth Mill Toll, where the Tollhouse is still occupied. A little way downstream is Choicelee Farm, and a little way further still is Gallows Knowe.

At Choicelee the Westruther road forks off to the west, still running through arable stock farm land till it reaches Foulburn Bridge. Along this section the boundary follows the Langton Burn in the gully below the road. Across the burn to the west rise the heather covered slopes of Hanged Man's Hill, and at the Foulburn Bridge the boundary swings almost due north to run across open moorland over rising land, till it reaches the Duns to Longformacus road by Henlaw Woods. Over this section it is running close to, and eventually follows the alignment of the old road from Greenlaw to Longformacus of which very little trace remains today. The Foul Ford, where the old road then crossed the Burn, was the centre point of a gruesome and supernatural tale. This involved the death early last century in circumstances of horror, first of the blacksmith from Longformacus and some years later of his son. Still standing in the heather is a stone erected to mark these grim events.

Where the boundary joins and then crosses the Longformacus road at Henlaw Woods, there is an outlook over the northernmost section of the parish. A watershed has been crossed and the streams are running north towards the Dye Water, instead of east and south as they do south of the watershed. First the parish extends north along the Black Sike to where it is joined from the east by the Sel Burn, then east along the Sel Burn to a point close to the crest of the opposite ridge. From this point it turns sharply

to the south and east roughly following the line of another watershed from which the streams run north and east. Along this line is the wildest and remotest part of the parish, most of it close to or above the 1000 foot contour. Black Hill is crossed at above 1100 feet, followed by a steep drop of 600 feet into Hell's Cleugh, and a steeper climb to the Ordnance Survey marker at 1159 feet on Langton Edge. From here the boundary runs east a little farther through Young Jeanie's Wood, to reach the point where the Wellrig Burn sets off downhill along the eastern boundary where this account began.

Stobswood Farm occupies the northern section of the parish with an area of lower-lying cultivated fields around the farm steading, merging into the rough grass and moorland around. All the cultivation relates to stock farming. Even with modern equipment, growing and harvesting grain crops in such surroundings is difficult, but there was a time when grain prices made it worthwhile to grow crops even in this unfriendly environment. Also on the lower ground opposite Henlaw Woods is the abandoned site of Old Stobswood, marked by a derelict house and ruins of other buildings standing among old trees. Extending around it is a large area of ridge and furrow land on which crops were once grown at a cost in effort which would normally be out of all proportion to the harvests that were reaped.

A recent development in this area is virtually invisible. It is the large underground pipeline carrying North Sea gas from North East Scotland to the South. Unlike the water that ran in the old mill lades this is not a renewable resource.

Turning East from Henlaw Woods, the road from Longformacus runs eastwards towards Duns reaching a high point close to Snuffyhole Bridge, above Langtonlees Farm, and below the radar masts on Hardens Hill. From various points along this road the full beauty of the Border Country can be appreciated. North are the long, quiet contours of the Lammermuirs. Westward beyond the moors in the foreground, the Eildon Hills, twenty miles away as the crow flies, are only in the middle distance. In clear weather the Moorfoot Hills and Ettrick Forest can be seen beyond, stretching into the far distance. To the south-west, south, and east, the views take in the whole length and breadth of Teviotdale and the Merse of Berwick, including the farm lands to beyond Wooler in Northumberland. Nearly 25 miles due south is the Cheviot, and this time it is the Border

Hills which stretch away south west into the distance. East beyond the valley, the scene changes to the North Sea at Berwick-upon-Tweed and the Northumbrian coastline to beyond Bamburgh Castle. And all this diversity of scenery changes with every change of light and through the changing seasons.

People have looked out on these scenes since prehistoric times. Probably the first settlements in the Parish were in this area, when Beaker Folk of the early Bronze age settled here anything up to 1800 BC. From their cist burials on Hardens Hill a very ancient beaker and other relics were recovered, which are now in the National Museum of Antiquities in Edinburgh. Later, prehistoric people built the circular fort on Raecleugh Head Hill which is the westernmost feature by Hardens Hill, and still close to the 1000 foot contour. It dominates the surrounding countryside. Looking up from Hardens Way we see the earthworks on the skyline. From the fort itself can be seen prehistoric cairns on nearby Dirrington Great Law and Dirrington Little Law, and farther off the Twin Law Cairns. These are clearly visible because they were rebuilt after the original cairns had been used as targets by a Polish tank brigade which was based in the grounds of Langton during the war.

Less prominent earthworks and cairns are recorded around and in the parish, from other earthworks on Langton Edge; two cists containing inhumations found on the lands of Middlefield and Crease in the 18th century; a masonry cist containing an inhumation in the Blakeside field found in 1943; and several earthen urns of different sizes containing what were probably cremations found when a cairn was removed from the summit of Crimson Hill in 1792. All of these sites adjoin the village of Gavinton, where Langton Church was built on the summit of Crimson Hill in 1798.

Progressing downhill from the fort on top of Raecleugh Head Hill, and just north of Raecleugh Head farmhouse, is another earthwork with massive defences comprising double ramparts and ditches, and nearby what was possibly another earthwork. Below Raecleugh Head farm buildings it is thought that there may have been a substantial village in the middle ages, but no traces remain. Nor does any trace remain of Langton Castle which stood to the east of Raecleugh Head.

A little farther down the hill are woods which surrounded Langton House with its village of Langton, its home farm Langton Mains, its walled garden, lodges and

other buildings. For centuries, and as recently as the early 1920's, this area would have been populous, and the hub of Parish life. Records relating to a series of Langton churches go back to 1150. Now there is very little left except a few smaller houses which are still occupied, and a sawmill operating in the area once occupied by the mansion house. The old churchyard is overgrown, and only traces remain of the last church which stood on the site.

Gavinton village itself still houses an active and close-knit community but is of relatively recent date. David Gavin built it half a mile to the south-east after he acquired Langton estate in 1758, to rehouse the inhabitants of Langton village, and it was named Gavinton after its founder. A new church built on Crimson Hill at the west end of the village retained the name of Langton, as did a newer church built on the same site in 1872 by a grand-daughter of David Gavin. Langton House itself had been rebuilt in the 19th century, but its inheritor in the 1920's never lived there and removed the roof. Partially demolished in the 1930's, it was completely demolished about 20 years ago.

When it was built, the village of Gavinton was a country village completely integrated into the life of the surrounding countryside. In July and August 1844 the new minister, the Reverend David Dunlop, visited all the houses in his parish recording who lived in them, and in many cases what they did. In Gavinton itself which then had 225 inhabitants he records more than 20 professions, trades and occupations. These include a quarrier and a sawyer; a stonemason and joiners; a slater and a plasterer; a hedger and carters; a blacksmith and a cooper; a bonnet maker and a shoemaker; a baker and a grocer; a travelling merchant and a journeyman tailor, not forgetting a second minister and the village schoolmaster. Numbers of others were recorded as labourers, or working at Langton House or neighbouring farms. Some of the villagers had their own smallholdings. There were at least one cow byre and stackyard in the village, and the minister had the use of a 10-acre glebe.

In the "country parts" David Dunlop recorded another 288 people, giving the parish a total of 513 inhabitants. On the farms are lists of the farmers and their families, stewards, shephers, hinds and bondagers. The latter were male and female farm labourers. There was a keeper of the Polwarth Mill Toll. In and around Langton House were gamekeepers, gardeners, coachmen, a cook, a footman, a housekeeper, lady's maid and other servants. The occup-

ant of Langton Mill was a farmer and miller. Pouterlany and Scotston no longer housed weavers. Pouterlany had two households one headed by a farmer, the second by a widow, 9 people in all where 2 live today. At Scotston there were still three households, one headed by a joiner who worked in Gavinton, another by a miller who worked at Langton Mill and the third by another widow. Again 9 people where 1 lives today.

On the farms there is a similar picture. In most cases mechanisation and changed cropping patterns have reduced the occupants to the farmer and his family plus one or two other households, compared to 43 people at Woodend, 36 at Choicelee, and 40 at Middlefield and Crease when David Dunlop made his record. No trace remains of Crease.

Gavinton village faces south across the fertile intensively cultivated farmlands of the Merse to the Cheviots beyond. Behind the village the outlook takes in the old grounds of Langton House to Raecleugh Head Hill behind. It is still very much a village in the country, but it is no longer a country village in the sense that its life is linked to activities in the surrounding parish and countryside.

There are no outlets for any of the old trades and services recorded by the Reverend David Dunlop, and the connections between the village and what he called the "country parts" of the Parish have become very tenuous. His successor now lives ten miles away in another parish, and the Parish children go to school in Duns. Many of the people living in the village have retired locally or from elsewhere. Most of those who work find their livings outwith the Parish, most of them in non-agricultural activities. Over more than three thousand years the area now comprising Langton Parish has seen many changes and clearly change continues.

KATHLEEN BARBARA FLEMING PRESIDENT 1984-1985

It was with deep regret that the members of the Club learned of the death of Barbara Fleming on 1st December, 1985. She was our President in the period 1984-85 and had been an active member of the Club for many years, taking part with much enthusiasm in all its activities.

At the outbreak of war, Barbara immediately volunteered and served with the Auxiliary Territorial Service from 1939 to 1945.

These duties were acknowledged by the award of the British Empire Medal. Following demobilisation, she joined the Women's Voluntary Service and saw further service in Burma and in Malaya, as it was then called, from 1946 to 1948. From there she went on to work in South Africa before returning to the United Kingdom.

It was her time in Rangoon that she first met her future husband, Tom Fleming. After his demobilisation Tom returned to his work as a planter in Sumatra and it was not until he came home on leave, in 1951, that they were married. From 1952 to 1963 they made their home in Sumatra where their three children, Sheila, Thomas, and Richard, were born.

Barbara had a gift for homemaking. Whether home was an isolated plantation bungalow amid the scarcity and insecurity of post-war Sumatra, or at Hardens Way—where the family settled in 1964—her first concern was to make a comfortable and welcoming home. The many visitors who came received always the same warm welcome. In the subsequent years, maintaining a home for the family and their friends remained her first concern, but whenever possible, she found special pleasure in accompanying her husband on his working trips to remote places in South-East Asia, the South Pacific, and Latin America, where she continued to add to her wide circle of friends.

This circle also grew larger through her involvement in many local activities, and through her membership of the Naturalists' Club from which she always had special satisfaction. Sadly, her year as President was marred by illness which progressed until her death. Although very ill, she courageously attended her last meeting in office and was present to hear her Presidential Address delivered by her husband. The Parish of Langton was her subject; very carefully researched and tackled with her characteristic thoroughness. She died only a few weeks later.

Barbara was held in high esteem by all who knew her. At her Memorial Service, in a church crowded with relatives and friends, many of whom were members of the Club, there were many references to her kindness and readiness to help other. We must be grateful for having known Barbara Fleming as a friend.

L.H.C.

A NATURALIST'S DIARY—1985

Dr. Albert G. Long

The year 1985 was noteworthy for its cold spring, wet summer and warm dry October.

My first excursion was on January 31 to Oxroad Bay near Tantallon Castle and I was rewarded with a nice specimen of *Eristophyton beinertianum* (Göppert) Zalessky. This fossil stem

was discovered in Lower Carboniferous rocks of Silesia in the 1840's. Its first discovery in Britain was in 1900 on the Scottish side of Norham Bridge by Dr. Kidston and Arthur Macconachie of the Geological Survey. Its generic name means "litigious plant" since its classification was in dispute. D. H. Scott assigned it to the genus *Calamopityx* but Zalesky disputed this and erected the new genus *Eristophyton*; even up to the present its affinities have remained dubious.

On February 9 I received word from Dr. Rotheray of the Royal Museum of Scotland that the moth I had captured in the Good Food Shop, Berwick, in November 1984 was *Cryptophlebia leucotreta*. It is a Tortricid, imported with Citrus fruits on which the larva feeds.

On February 14 I took a slice of limestone containing *Eristophyton* into the Royal Museum, Edinburgh. It was from a loose block found on shingle near Gin Head to the west of Tantallon. Dr. A. Livingstone tested it and ascertained that it contained calcium, iron and manganese but no barium. I etched it and made peel sections but the plant cell walls appeared translucent.

On February 16 Professor G. W. Rothwell of Athens, Ohio, visited me and showed me a ground section of a large stem extracted from the cliff at Oxroad Bay. This proved to be *Eristophyton beinertianum*.

On March 2 I searched for it along the left bank of the Tweed from Norham Bridge to Ladykirk Burn but without success. Oystercatchers were back on the shingle beds.

On March 6 honey bees were active on the crocuses and on the 9th I saw wild geese flighting N.W. near N. Berwick.

At Cove, near Cockburnspath, Skylarks and Yellowhammers were in song on March 11 and a large rock-fall below Cove village had exposed compressions of *Archaeocalamites radiatus*.

On March 12 at the Royal Museum, Edinburgh I was shown by Dr. Waterston an illustrated catalogue of plant fossils which had been prepared by Robert Dunlop of Kilmarnock, a remarkable self-taught man known to Dr. Kidston. I suspect he may have been the collector who found the second specimen of *Eristophyton* at Norham Bridge mentioned by D. H. Scott in his second paper (Scott 1918).

On April 2 while searching shale for spore samples at Langton Burn below Gavinton sewage plant I found a Dipper's nest with eggs. It is an early nester. The spores from this site are very fine and have recently been examined by G. Clayton (Scott *et al.*, 1984). The next day Bumble bees were on the wing and Greenfinches and Linnets in song. On April 4 a Chiffchaff was heard near the footbridge between Edrington and Paxton. I visited the volcanic dyke below Cumledge House and saw granitic balls in the ash beds nearby. On April 8 several large concretions were seen exposed by flood water at Lennel Braes but on cracking them the plant remains were very poorly preserved.

On April 12 I met Capt. Taylor at Norham House (the former

vicarage) and with his kind permission searched round the periphery of his garden for the *Pitus* stems which were said to be placed there after the building of Norham Bridge when Dr. Gilly was Vicar (*H.B.N.C.* II, 182). I was unsuccessful but saw the old-world garden plants Butcher's Broom, Stinking Hellebore and a purple *Corydalis*.

On April 13 I visited Dunglass Dean and thence up the coast to Bilsdean Burn. I found the clay shale with *Sphenopteris affinis* but failed to find the ten inch coal nearer Linkhead. In the shale above this seam have occurred the only reputed *Cordaites* of lower Carboniferous age I know of in this area (Crookall 1970, p. 797).

On April 16 I saw a Green Veined White on *Aubrieta* and on the following day a Willow Warbler was singing near Castle Drive. At night about 9 p.m. a pipistrelle bat was catching midges along Windsor Crescent. Recently there have been many lacewings in the house after hibernation indoors. Ladybirds, 7-spot and 9-spot have become active outdoors.

On April 20 a pair of Wheatears on passage was seen near Whitekirk and one swallow near Tynninghame. A specimen of *Eristophyton* found at Oxroad Bay proved to be *E. waltonii* Lacey having medullary rays up to six cells wide (Lacey 1953).

At Baramill Plantation on May 2 there were House Martins and two Common Sandpipers near the Whitadder below Cockburn Bridge. At the scaur of Old Red Sandstone near Preston Haugh one fossil stem with longitudinal ridges was seen. It could have been *Archaeopteris hibernica* but proof of foliage was lacking.

On May 6 three swifts arrived at Windsor Crescent greeted by the first apple blossom. On the 7th a 14-spot ladybird was found by Miss G. A. Elliot on hawthorn near Craster. It was brown with seven white spots on each elytron. By May 8 a redstart was singing regularly at the Meadows.

During the winter I had kept two pupae of the Puss Moth in a garden shed. On May 19 a female emerged so I put it outside. In the morning it had moved to a nearby clothes post where it remained *in cop* with a male for two full days, a result of the cold weather. On May 21 a male emerged about 3.45 p.m. Its wings expanded in about 30 minutes. I put it outdoors and in the morning it had flown.

On May 30 a male Orange Tip was seen near the Blue Stone Ford feeding on the flowers of *Cardamine amara*. The same day two more were seen near Allanbank Mill Farm and cuckoo bees (*Nomada* sp.) were active in the garden wall nearby. A Garden Tiger larva was seen on Creeping Thistle below the Allanton Bridge over the Whitadder.

On June 1—a glorious day, many Orange Tips were flying at Lennel Braes where there is much Dame's Violet. Garden Warblers, Sedge Warblers and Blackcaps were in song, but no Sand Martins, victims of the north Africa drought. A Greater Spotted Woodpecker was at work on the many elms affected by Dutch Elm disease.

On June 8 I was at Oxroad Bay and saw one Painted Lady, and an Eider Duck sitting on eggs near high tide level. Another Painted Lady appeared on our strawberry patch on June 15, and on July 7 one visited Sweet Williams. The last record was October 21, a second brood specimen. Mr. R. F. Bretherton informed me there was an enormous influx starting in April. It reached Westmorland and Furness with one record for Cape Wrath on May 28 and a few in Orkney July 2. There were at least three incursions in April, late May, and early June. It is a great traveller and truly cosmopolitan.

In June, at the Crooked Burn near Foulden Newton I got about a dozen fossil seeds of *Samaropsis bicaudata* Kidston in shale. These were probably borne on the primitive pteridosperm *Stenomyelon* and are identical with the petrified seeds *Lyrasperma scotica*. They are often closely associated with the frond *Alcicornopteris convoluta* though as yet we have not proved connection between this and *Stenomyelon*. The seed megaspores were peeling off the shale and were readily macerated in concentrated nitric acid and sodium chlorate. I managed to make mounts and got one showing three abortive spores at the apex.

A Buff Tip moth was seen squashed on the pavement near Berwick Town Hall on June 21.

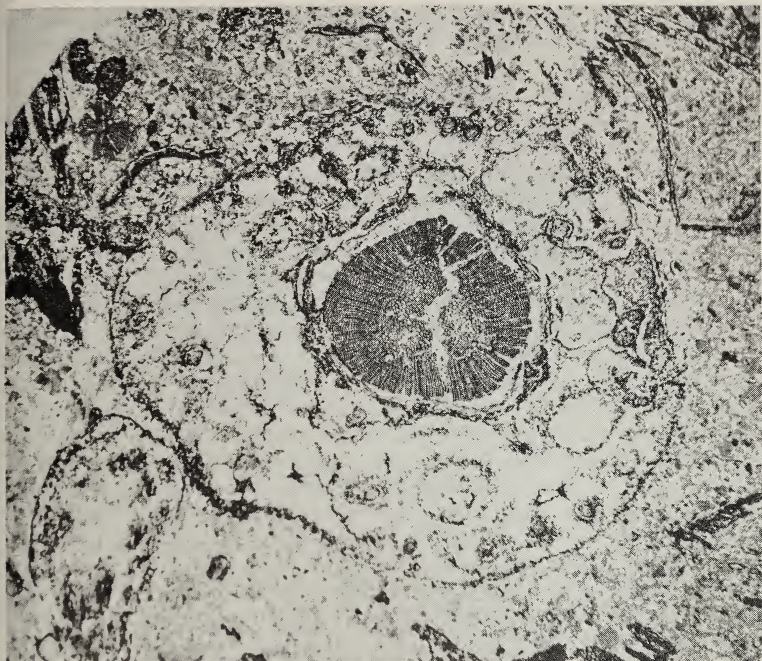
On June 25 a cock bullfinch was seen feeding a grown young bird on Windsor Crescent.

On August 7 a dead Swallow Tail moth was found near the Pier House and on the 30th a Small Fan-footed Wave near Burnmouth, both by H. F. Church.

August was very cold and wet. About ten swifts were last seen at Windsor Crescent on the 18th. The last House Martins were seen on October 13, five, hawking flies high over Castle Drive on a bright sunny morning.

I was at Todmorden, West Yorkshire August 20-28 and took a freshly emerged Copper Underwing moth (*Amphipyra pyramidea*). By a strange coincidence Miss G. A. Elliot reared a similar specimen from a larva taken on a tea-rose in Castle Howard gardens near York. This proved to be *Amphipyra berbera*, a species only recognised as distinct in 1968. Both moths are near the limit of their range in Yorkshire and become rare northwards. We know of few records for Northumberland, and none for Berwickshire.

One bonus of the wet summer was that the Whitadder bed was scrubbed clean. This exposed a good fossiliferous block below Edrom scaur. It contained two stems of *Stenomyelon tuedianum*, and many seeds of *Lyrasperma scotica* clustered near *Alcicornopteris*. The primitive pteridosperm *Stenomyelon* is of special interest in that it was first discovered in Berwickshire about the middle of last century by Adam Matheson an amateur geologist of Jedburgh. It was later re-discovered at Norham Bridge and described in 1912 by Kidson and Gwynne-Vaughan. *S. tuedianum* is the type species of the genus. In the Edrom block one of the stems



Stenomyelon tuedianum Kidston from Whitadder south bank near Edrom. Transverse section of petrified stem showing central solid primary xylem surrounded by secondary xylem and cortex with about five decurrent petiole bases. Note one free petiole of *Kalymma tuediana* at bottom left. Geological age: Upper Tournaisian, Cementstone Group, Lower Carboniferous. c. 340 million years.

shows the stele completely surrounded by cortex which is largely composed of the decurrent bases of five or six petioles known as *Kalymma tuediana*.*

Perhaps the most interesting event of the year occurred in the Indian summer we experienced in the month of October. On the 2nd I caught a specimen of the Vestal *Rhodometra sacraria* in a stubble field at West Blanerne. This small migrant moth breeds in North Africa and southern Europe and had never been recorded before in Berwickshire. It must have been carried here on warm winds or convection currents. In the same field I saw a Painted Lady and Silver Y moth but these could have come from early migrants and been second brood specimens. On the 14th I caught a second Vestal in a stubble field near Broomhouse Mains and on the 17th I took a third at the side of the Whitadder in rank vegetation above Hutton Bridge. Dr. Keith Bland of Edinburgh informed me that one was taken about 12 October at Gorebridge by P. Brown and that there are no Berwickshire records for the Vestal in the Scottish Insects Records Index kept at the Royal Museum of Scotland. Mr. Andrew G. Buckham of Galashiels has also kindly informed me that two were caught on Oct. 12-13 in a stubble field near the Tweed not far from Scot's Mill, Peebles by Miss Helen Robertson. Like those in Berwickshire the moths were disturbed by day. Dr. J. Parrack of Whitley Bay has also informed me that specimens were taken in Northumberland about the same time at Stocksfield, Newham Bog and Holystone. Mr. R. F. Bretherton who reports annually on migrant lepidoptera informed me that there were two phases of immigration, the first commencing on Sept. 18 and the second in early October. 14 were trapped at Brancepeth in Durham and 26 at Beetham, Westmorland showing that this was a very considerable immigration. Usually it is more limited to the south of England.

On Sept. 29 I saw two larvae of the Large Elephant Hawk moth on Rose-bay Willow-herb near the Whitadder above Blanerne Bridge. On Oct. 1 another was caught in a garden on Windsor Crescent.

On Nov. 11 I went to Horncliffe Dean and searched again near the old mill for the fossil seeds found in shale last century by J. Rhodes of the Geological Survey. Now known as *Samaropsis nervosa* it was first described by Kidston in 1893. The seeds are rare and of interest because they could be cordaitan. I was unsuccessful. The origin of *Cordaite*s and the conifers is as great a mystery as that of Angiosperms. My own opinion is that *S. nervosa* could actually be the compressed state of *Eurystoma burnense* which occurs at Burnmouth, Lennel and Cove. This petrified seed showing structure is triangular in section when young and possesses three wing-like extensions. If compressed it might only show two wings like *S. nervosa*. Another resemblance is that both possess radiating fibrous bands in the wings. If they are identical then *S. nervosa* would not be cordaitan but would be a pteridosperm seed like *Samaropsis bicaudata*. Thus it would belong

to the *Calamopitys* seeds. Hence pteridosperms could prove to be the ancestors of both conifers and flowering plants and themselves descended from progymnosperms.

My last collecting excursion of the year was to Oxroad Bay on Dec. 14. Already the fulmars were squatting on their nest sites. I explored the bay immediately below Tantallon Castle and found an unusual fossiliferous pebble containing calcareous worm-tubes adjacent to dark coloured silicified plant material containing a decorticated stem of *Stenomyelon tuedianum*. This fossil plant is frequent in Berwickshire but rare at Oxroad Bay and it was only the second record for this locality. The rock proved as hard as flint to slice on the cutting machine and it had to be etched in hydrofluoric acid to get peel sections, nevertheless it was of interest and raised questions as to whether there were fumaroles charged with silica at the time the volcanic rocks were erupted.

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AN ACCOUNT OF A MEETING OF THE BERWICKSHIRE NATURALIST'S CLUB HELD AT GRANTHOUSE ON JULY 25th, 1849. FROM DR. JAMES HARDY'S UNPUBLISHED NOTEBOOK No. 4, pp. 160-184.

"On going down to Grant's I found Mr. Milne just issuing from breakfast, in company of Mr. Melrose of Coldstream, and Mr. John Boyd jr. of Cherrytrees, (son of the brother-in-law of Mr. Turnbull of Abbey St. Bathans. Cherrytrees is a small estate, but of good land). Mr. Milne mentioned having visited the Brockholes quarry that morning, but found nothing particular. The Greywacké rocks of this district offer but slight indication of the existence of organised remains; the fineness of their structure

shewing that they have been deposited in deep water, where animal and vegetable life is scanty. This is the only quarry in this vicinity where slabs of stone, 6 or 7 feet long can be got, and from it ancient grave stones obtained.

The stony nature of the land was remarked, which Mr. M. appeared to attribute to the weathering of the rock at its outcrop, although the rounded nature of the stones, and a scatter from a trap region appear to be due to the action of water. The advantage or disadvantage of these stones to the farmer was then adverted to. It was mentioned that although apparently against good cultivation these stones might still be of value in keeping the soil open where stiff, in heating the soil, in preventing rapid radiation, and in sheltering the herbage. Grass it may be observed will grow better in a light soil among stones, than if no stones at all, when condemned to barrenness. Instance mentioned of farmer having to lead them on again at Hoprig, in this neighbourhood. It was observed that the light soils here, when the lime out of them, were covered almost to the exclusion of other grasses, by *Agrostis*.

The benefit of cutting down thistles to weaken them was also noticed. In connection with the localities Mr. Milne mentioned having recently read Somerville's autobiography with which he appeared considerably interested; particularly his courtship with my old friend Miss Forsyth; and with his general intelligence. The site of St. David's Cairn, placed like Ajax's monument, to command a far view, was passed, calling up the memory of primitive ages, and protestations against the rage for demolition of those venerable edifices. It was remarked that these structures such as Edin's Hall, Arthur's oven, were British rather than Roman. An old place above Butterdean mentioned as very ancient called Kilspindy, from cilla a cell, as Bonkill, Icolumskill, Killin, Kilmun, Kilpatrick.

In examining my collection of insects various interesting topics were started. I noticed that I had hitherto only met with the larva of the turnip fly, in the wild radish, and mustard; and Mr. Melrose stated that so fond it was of the latter plant, that it had been proposed to sow mustard in the hollows, to save the turnip seed, and that it had sometimes been effectual. The great abundance of yellow mustard this season was noticed as very remarkable; the bilberry was noticed just ripening; and heather would be late in flower. Roses both wild and in gardens have bloomed exceedingly profusely. A general want of butterflies was also noticed. The various metamorphoses of insects were then explained. In connection with the Glow-worm Mr. Milne mentioned as having seen some fine *Flugoridæ* in America which gave light in the forests by night. He also mentioned the sawing beetle which is said to cut off a branch of a tree by a process like a saw projecting from its thorax or head. In connection with the aphides, Mr. Milne mentioned the great destruction the little *Coccus* of the spruce fir had occasioned in the Highlands, great portions of forests being destroyed by them. They were quite

blackened as if scorched, as they appear in the back end. He mentioned Sir Charles Lyell's opinion, many of whose trees when he visited him at Kinordy, were falling from it; that the larch not being a native tree was degenerating, and that the insect took advantage of its sickness and attacked it. On the other hand I stated, that I considered it introduced into nurseries from abroad, and thus was gradually propagated throughout the country, and that it would attack the larch even if in its healthiest state. The introduction of *Aphis larigera* was mentioned as similar. Mr. Selby afterwards supported the latter opinion, and mentioned that this disease was found in the native country of the larch. The means of destroying scale were then referred to, some mentioning hand-picking. Mr. Milne mentioned a plan he had got in answer to a query put to *Gardeners' Chronicle*, and Mr. Boyd mentioned daubing the plants over with mire and then syringing as very effectual. The nature of honey dews was then discussed. Mr. Milne mentioned that they were very copious last season on a hedge under his lime trees. He referred to a substance sent home from Australia proposed to be used as a substitute for sugar about which the Edinburgh philosophers differed widely, some supposing it the production of a gall fly or the aphid tube others an exudation. He appeared particularly surprised to learn that the gall-fly had no mouth and in its perfect state took no sustenance. In reference to fungi on flies Mr. Milne mentioned the vegetable caterpillar out of whose head a tall fungus grows. Mr. Milne opened some scales in May and these had eggs. The nature of the Cochineal and Kermes insect was referred to, the copious honeydews mentioned by White of Selborne, and those found in Persia; and the opinion of German commentators that wild honey of scripture was a honey dew. I pointed out the grub of a weevil in Turnip seed, and Mr. Melrose mentioned having noticed it in Mustard seed. In returning again towards Grant's the cocoons of the (moth) *rumicis* were pointed out on the dock; also the larva of a fly widening the leaves; and the larva of ? devouring the flower buds and seeds of Spurrey. In the course of the walk Mr. Milne mentioned the custom of some places in this vicinity for persons who had tenures having right for wood in the woods of the manor "for harrow and barrow, for soam and team", soam explained as gear for the oxen. I mentioned the old lease of Brockholes, where the tenant had right to as much wood as would repair his utensils; and that people of old Cambus in Quixwood's Charters had a right to brushwood, call for Kainfowl, and so much straw if needed, mentioned. An adder appeared on the road which drew our attention once more to natural history. The use of olive oil was then explained to counteract. Here we met the other members of the Club who had come later. Mr. Milne here left us, conspicuous among all the rest by his tall form, like Saul among the people. He has rather a longish nose, and a part of flabby skin hanging down before the point makes it rather a prominent feature. We here met Dr. Johnston,

Mr. Selby the ornithologist, his son-in-law Sir Thomas Tancred, Mr. Broderick, Mr. Jerdon, and Mr. Hepburn. Mr. Selby is an exceedingly pleasant, unassuming polite man, who appears more willing to listen than to speak. He is of middle size, grey haired, mouth and chin rather prominent, with the mouth inward; dressed in plaid suit, light closely chequed and oldish hat, square coat, as had Dr. Johnston. Shortly after joining, the Club noticed a bird crying, and apparently to be willing to allow the ornithologist to show his skill, but he declared he had not seen it; and I called out it was merely an ox-eye to which they all agreed. Brambles, Roses and Hieracia occupied the rest of the walk. I captured a fine female half wingless moth on our Green-road. Mr Jerdon is a young tallish thin-faced genteel person, with rather an English accent, and an unpleasant stammer. He was the botanist of the party. The galls of the spruce fir were opened and examined as we passed them. The company then assembled in my room, and went over such of my collection as they had time for; when Dr. Johnston cried out that they should stay no longer, unless they declared the Club in committee, and accordingly all left but Mr. Selby, who appeared to be much taken with my collection. Sir Thomas Tancred appeared to be short sighted, as he examined all objects with his glass even the dishes at table; a pleasant person, however. Mr. Broderick bald, and ruddy, and somewhat of a haughty look, apparently a lover of field sports. In going down the woods I pointed out the knapsacks of *Attelabus curculionidius*. The life of *Hyllobius piniperda* then referred to. Mr. Selby was of opinion that it never attacked trees till in a state of decay or disease when vital powers fail; and he knew at once when a tree was going to be attacked by it. Eggs and larva only in old stumps, and trees. The young trees attacked only by old insects, and it is chiefly the side shoots that are affected. Noticed several Black Italian Poplars planted in our bog. His trees far too thick in the bank, and are killing each other. (If pruned them the wood full of black knots, or should paint the part till it heal. These self pruned ones in thickets, when come out to air, have sides all scorched, are sickly things unable to stand the breeze, and as F. Turner says, are like children brought up in luxury, turned out to the moorland to lead a gypsy life, for which they are quite unfit to bear the brunts). Mr. Selby considers the silver firs in the dean to be killed by Coccus, and pointed out their white exudation on the stem. They cover he says, the whole stem and it dies. Many of his had so failed. Mentioned the great abundance of *Tortrix viridana* in some oak woods: he had seen whole hill sides in the highlands brown with it. We noticed the bracken's leaflets rolled together and of black hue in specks here and there, with a larva in the inside. A variegated plane pointed out; a Weymouth pine, and several chestnuts, which Mr. Selby says are much grown in the south for hop poles. The destruction (and destructiveness) of rabbits was adverted to, Mr. Selby said that in one place he had to plant there twice and only succeeded at last by getting them

rooted out. The rabbit is very prolific and is said between itself and descendants to produce 40 pairs in a season. The old ones produce 4 or 5 at a time, sometimes 6, and the second day after the young are born, they are with young again: their young ones also produce young in the same year. The hare also has several broods, and has sometimes 1, 2, or even 3 at a time. In winter the rabbits are very destructive to oaks eating them off above the snow, when cannot get to other food. The beauty of the Pease Bridge was much admired, particularly from the new road Sir John Hall has lately caused to be made. The ferns were growing beautifully in the shady glen, and the little waterfalls and rapids were noticed as peculiarly adapted for fishing. The rocky bank below the bridge was much praised. On the rock near the bridge *Bolaea perversa* and *Pupa umbilicalis* were noticed. The botanists procured *Aspidium angulare* and *aculeatum* and *Scolopendrium vulgare*. The Elm grows wild here, and I noticed here in a winged state, its aphid, in its pouch. *Anthomyia meteorica* was particularly prevalent, and it was observed that they never went to a white hat as long as they could get a black one; hence the use of white tassels for horses ears; ladies with straw bonnets are little annoyed. Gradually disperse as get to a more airy situation. These flies are all females. The custom of killing hawks etc. was discussed; Mr. Selby stated that the Kestrel lived almost entirely on mice and vermin and that in Kent he has seen it hawking for cockchafers, taking them in its claws, and putting them into its mouth. Squirrels eat bark and tops of larches. Mr. Selby expressed his opinion, that shortly all our prettier birds of any size would be extirpated. On our return to Grant's we met Dr. Wilson of Kelso, a rather rough *Scotch* Doctor, not very select in his stories, Mr. Renton of the Highlaws, a good natured person, and Mr. Stephens, author of the Book of the Farm, a substantial person of "merit", with grey head, well filled, not plump features and very conversible. Mr. Selby occupied the chair and Dr. Johnston the foot. A poor young woodpigeon Dr. Johnston had brought up from the dean, died behind him, which occasioned no small witticism. Mr. Stephens mentioned, that from several observations he had recently made, believed that after the young were reared the blackbird and thrush acquired quite a different sort of note; one cried "to you, to you", (I did not gather the other). Mr. Selby was disposed to attribute this to the general failing of its notes after that season, and instanced the chaffinch; but this did not satisfy Mr. Stephens. The esteem in which chaffinches are held in Germany was mentioned by Dr. Wilson; on being taught to imitate other birds they scarcely could part from them. Some of them worth seven guineas. The Bullfinches . . . chiefly and best in the dark, and mostly by shoemakers, tailors, and those who have much time. The general scarcity of cuckoo in cultivated districts was referred to. Mr. Selby said only a few now found in the outskirts of his woods. Dr. Wilson mentioned keeping a young one till gooseberry grubs failed, got

in hedge-sparrows nest. Mr. Selby stated that mostly find in nest of grey cheeper, and that he had managed to keep one till April by feeding it with slices of mutton. Mr. Selby adverted to the biting effects of midges, especially the *Simulia*, the small *Ceratopogon* does not occur in Cambridgeshire to any extent. Near Ben Lomond, people mentioned mowing with gauze over face, as very ridiculous looking. Mr. Milne mentioned in the morning that he had been able to trace the existence of a lake all along the Eye, and that Mr. Coulson had mentioned shells in the mud there; this he doubted from fragile nature; and I attributed it to exaggeration of the workmen. With regard to British pearls, only found in some rivers, I was inclined to attribute it to injuries the creature has received in their rocky beds, but was told it was in deep slime pools they were found. Common mussel walking on its edge very pretty. At Dinner Dr. Johnston referred to holes in rocks made by common limpet; this Mr. Hancock finds to be caused by spiculae imbedded in the belly, which are renewed when others wear out. It was then started whence fluid derived; some said food, as for instance the small infusoria which mostly siliceous, or from sea-water; some denied that any silica in water, unless contained potashes. The merits of different kinds of shaving soap, and razors were discussed with all formality and gravity; the size of large melons, enlarged on; and the beauties of the southern scenery of Scotland described. Among other things Dr. Johnston said in reference to one author borrowing from another "depend upon it, you fellows cabage very much" and Mr. Stephens confessed there was no other way for it. Dr. Balfour's treatise on Botany was referred to, in which a great number of the woodcuts are from Jussieu, and foreign authorities. Several plates in Denny's work on ? are said to be copied from older sources.

Curtis now said to be old and infirm and rather crabbed in his age. Walker described as a tall and thin-faced man, and E. Doubleday also very tall. Few wasps this year, and late in coming, and those chiefly tree wasps.

At the close three invitations were given me by Mr. Milne, Mr. Selby, and Sir Thomas Tancred to visit them. I accompanied Dr. Johnston to the train at the close, and so they passed on their way."

KELSO ABBEY

Dr. J. L. Trainer

The Club visited Kelso on 11th September, 1985.

The date of the first church in Kelso is not exactly known but one was in existence before the abbey was built on the site where the ruins now stand.

Our story begins in 1113 during the reign of Alexander I when his brother David was Earl of Northumberland. David, who had adopted the religious zeal of his mother Queen Margaret, brought a colony of thirteen monks under Abbot Herbert from the Abbey of Tiron near Chartres to found a monastery at Selkirk. They did not consider the area suitable for all their purposes so moved to Roxburgh Castle. From there they surveyed the locality, finally electing to build on the left bank of the Tweed just below and opposite the castle. The abbey was granted its foundation charter on 3 May 1128 by which time David had become the king. At first known as Roxburgh Abbey the name was changed to Calco in deference to the village beside the site. The seal of the Abbey of Calco, still in good condition, can be seen at the Museum of Antiquities in Edinburgh.

One can only speculate why the monks moved from Selkirk. Presumably they would prefer to be under the protection of the castle, to be nearer the king who resided there, and to be in the proximity of the flourishing town of Roxburgh, one of the four Royal Burghs of Scotland. There are other possible reasons. The building of an abbey was not merely erecting a house of worship. It had to cater for interests spiritual and temporal. A large acreage of ground with a good water supply was essential. Many buildings were required apart from the church. Associated with it were the cloister, sacristy, chapter-house, dormitories, refectory, infirmary etc. Alongside these were storehouses, workshops, brewhouse, bakehouse etc. In addition there was a physic garden and orchard, the whole complex surrounded by a wall. At Kelso the buildings stretched almost to the river, the gardens to the north occupying the space now thought to be Kelso square.

Abbeys varied in their orders. Jedburgh was Augustinian, Melrose Cistercian, Dryburgh Premonstratensian, yet in outlay the planning of monastic buildings, with a few exceptions, tended to follow a standard pattern. A monk moving from one religious house to another would have little difficulty in finding his way around. Naturally this can be very helpful to archaeologists when excavating a ruined site.

We are fortunate to have a full account of Kelso Abbey buildings before they were destroyed. This was found in the archives of the Vatican where it had been lying unnoticed for centuries. It was compiled in 1517 by John Duncan a cleric from Glasgow. From it we are able with some confidence to visualise the position and much of the architectural details of the buildings.

The church was in the shape of a greek cross, unique for the period. It had three doorways and a wooden roof with an outer covering of lead slates. Inside it was partly paved in stone and partly with bare earth. There were two lantern towers crowned with pyramidal roofs. The tower at the west end contained the bells. The church was divided by a transverse wall, the outer part open to all parishioners, the rear solely for the monks. The sacristy was to the right of the choir, the cloister garth to the

south. The chapter house was at the north east corner of the cloister. The other conventual buildings ranged south of the religious houses.

There was a community of some forty monks, and a large number of lay brothers, with the abbot at the head. The abbot was the lord paramount of Kelso within, and without, the abbey. e.g. the town market could only be held with his permission. He was the father and leader but also an administrator as he had to supervise the collection of rents, tithes, etc. as well as attending to the internal management. He ruled with strong authority living in state in fine apartments. He had hawks and hounds and entertained his guests at a private table. The Prior acted for him in his absence, then came the Sub-Prior and other officers such as Almoner and Cellarer.

The Kelso Abbey complex took about one hundred years to complete; consequently, changes in design during its erection are evident. These are still noticeable today. As the east end was sufficiently complete for David's son Henry to be buried there when he died in 1152, it appears that this must have been one of the earliest structures. The buildings were completed by 1212. The abbey was dedicated to the Virgin Mary and St. John by David de Bernham, Bishop of St. Andrews in March 1243. It was in active existence for over four hundred years but unfortunately three hundred of these were in troubled times.

Kelso abbey was the first Tironensian house in Britain and from its inception gradually increased in importance to become the largest, wealthiest, and arguably, the finest of the Scottish abbeys. It also became the most powerful. By 1165 it had become so important that the privilege of wearing the mitre and pontifical robes was granted to the Kelso abbot by the pope thus giving him precedence over all other abbots in Scotland. This entitled him to attend and assist at all general councils and to be at the head of all royal processions. The wearing of the mitre remained with Kelso for over two hundred and fifty years until it was transferred by James I to St. Andrews in 1420.

The abbey not being a garrison was a frequent choice for treaties between England and Scotland. Royalty was buried there. James III was crowned there in 1460 at a ceremony described as one of the most colourful in the abbey's history. The Bishop of Rochester stayed for some time from 1209 when England was under interdict by the Pope. When the Bishop of St. Andrews died on returning from York in 1238, after solemnizing the marriage of Alexander III to Henry III's daughter, he was buried in Kelso abbey; as was David de Bernham in 1253 when he died at Nathansthirn (Nenthorn) but probably the most impressive occasion, apart from the coronation, was a royal banquet in 1255 when Alexander III entertained Henry III.

The revenue of the abbey was immense. It received money and supplies from thirtyseven parishes as far west as Lesmahagow and as far north as Cults near Aberdeen. It also received supplies

from several manors, mills, and breweries. It was richly endowed by its royal patron. One tenth of all royal cattle, one tenth of all cheese out of Nithsdale & Tweeddale, and half the fat and tallow of royal cattle slaughtered south of the Forth (as well as the grease of whales come in to the Forth) were bequeathed to the monastery. Over seven thousand sheep were owned and maintained by the abbey, the wool being transported down river to Berwick-upon-Tweed.

Monks let land on their holdings by a system known as Steelbow, whereby landlords advanced stock and plant in return for certain services from their tenants. These included manpower in the event of attack. A document referring to Redden (in medieval times a villa of some importance) is of interest. This states "Those at Redden are bound each to give carriage with one horse from Berwick weekly during summer and a day's work on return, or if they did not go to Berwick, two days tillage."

The abbey possessed one of the finest libraries. Its caligraphers were renowned for the excellence of their art. It was also a seminary for education to which Scottish nobles sent their sons for knowledge and culture. Local orphans were also educated until they came of age. Unfortunately the death of Alexander III in 1286 ended what is often termed the golden age of Scottish history which had started with the reign of Malcolm Canmore in 1058. The wars of independance which followed continued for over two hundred years.

During this period the abbey's proximity to the border laid it open to frequent attack. In the sixteenth century in particular it was severely damaged on several occasions and was constantly under repair. Finally in 1545 it was completely destroyed by Henry VIII's troops under Hertford and what survived was further damaged by the Reformers in 1567.

The first commendator after the dissolution was Sir John Maitland of Thirlestane. By 1580 the west end of the ruined nave became the locus for the Parish church, the school, and the town prison.

The Earl of Bothwell annexed the ruins for the crown in 1592 and in 1602 Robert Ker of Cessford, by then the Duke of Roxburghe, received the abbey and its properties.

In 1919 the 8th Duke of Roxburghe presented the abbey to the nation. His widow in 1933 erected a memorial cloister adjoining the west abbey entrance which is now the burial vault of the family. It is a modern version of the Abbey's Romanesque style including a 13th. century doorway at its entrance thought to have come originally from the chapter-house.

The abbey itself now a fragmentary pile, which hardly engenders a spark of interest to the average passer by, nevertheless leaves behind it a story in stone which should be remembered by all who have an interest in Scottish history and its ecclesiastical origins.

REPORT OF THE LIBRARIAN 1985-1986

It was the wish of the late Rev. H. S. Ross, a past president, that his extensive library of books on the Border Counties of England and Scotland should be given to the Berwickshire Naturalists' Club, and a suitable home for the collection has been found at Berwick Museum, thanks to the generosity of the Berwick Borough Council. The room is secure and temperature and humidity are controlled, providing a good atmosphere for the preservation of books.

The Club is most grateful to Mrs Ross for her kindness and co-operation during the transfer of this valuable bequest to the Library. We would also thank Northumberland County Libraries for housing our collection until the space available at Berwick Library became inadequate and Mr Richard Doughty and the staff of Berwick Museum for much hard work on our behalf.

ACQUISITIONS

Gordon, A. Hearts upon the Highway.
 Gordon, L. Berwick upon Tweed and the East March.
 Hardy, J. The session book of Bunkle and Preston, 1665-1690.
 Hay, D. Between the muckle Cheviot and the sea.
 Home, D. M. High water marks on the River Tweed.
 Johnston, G. Flora of Berwick upon Tweed.
 Moffat, A. Kelsae.

<i>Income</i>		<i>Expenditure</i>	
Opening balance	£640.78	Postage	£4.30
Sales of History	18.49	Stationery	.84
Interest	80.91	Printing	21.28
Total	740.18	Balance fwd	713.76
			£740.18

Income

Balance in Bank at 21/9/84	£69.71
<i>Subscriptions</i>	
Annual, Junior & Libraries	1749.95
Entrance Fees and Badges	52.55
<i>Sundries</i>	
Visitors' Fees	55.30
Donations	16.25
Arrears of 1983/84 Subs collected	8.00
Sale of Club Ties	4.50
Profit on Slide Show 1/11/84	8.70
Profit on Visit to Burrell Collection	30.50
B.B.C. payment for assisting with Broadcast of "North Country"	23.10
Transferred from Deposit Account	1300.00

3318.56

 £3318.56

Expenditure

Printing	1737.91
Printers' Postages	173.56
<i>Subscriptions Paid:</i>	
Council for British Archaeology, Scotland	10.00
Association for Protection of Rural Scotland	10.00
Berwicksire Council of Social Service	4.00
<i>Sundries:</i>	
Refund of Subs overpaid	22.95
Berwicksire Council of Social Service, for duplicating 1983/84 Accounts	6.28
Library Insurance	18.19
Hall Charges	11.40
Bouquet of Flowers	10.00
Donation to Lamp of Lothian Trust towards Welsh Carlyle Museum	10.00
Toye, Kenning & Spencer, for supplying Badges	134.08
<i>Officials' Expenses:</i>	
T. D. Thomson, Editing Secretary	13.68
Mr. & Mrs. D. Mackenzie Robertson, Joint Field Secretaries	375.29
Miss. S. G. Stoddart, Treasurer	23.57
Transferred to Deposit Account	750.00
Balance in Bank at 20/9/85	7.65

3318.56

 £3318.56

Balance on Current A/c at 21/9/85.....£7.65.

Balance on Deposit A/c at 21/9/85.....£1893.92.

9 October 1985

Audited and found to be correct and in order.

"E. J. KELLIE"

HISTORY OF THE BERWICKSHIRE NATURALISTS' CLUB

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FIELD SECRETARIES' REPORT 1986

The following places were visited during the Season:-

1st Meeting EDINBURGH.

14th May The Royal Botanic Garden. Introductory talk by Dr. Ian Edwards, Ph.D., a member of the staff.

2nd Meeting DALKEITH.

12th June (a) Church of St. Nicholas by courtesy of the minister, the Rev. W. Brown.

(b) Butterfly Farm. Mr. Simcox, the curator, guided the Members.

(c) Melville Castle. Messrs Ian Young & Ian McDougall outlined the history and architecture of this celebrated castle.

(d) Elginhaugh. Excavation (1986) of a Roman Camp.

3rd Meeting JEDBURGH.

17th July (a) Jedburgh Abbey excavations (1984) explained by Dr. Richard Grove.

(b) Monteviot House. The Club was welcomed by the Marquess of Lothian and The Countess of Ancram. The House and the Woodland Centre were much appreciated. Approximately 140 Members attended.

4th Meeting STOBO and DAWYCK.

13th August (a) Stobo Kirk. The Minister, the Rev. Ian Rennie, greeted the Members and the history & architecture of the Kirk were described by Eric Hall, Esq., R.I.B.A.

(b) Dawyck House. Lt. Col. A. N. Balfour welcomed the Club. A tour of Dawyck Botanic Garden was conducted by David Binnie, Esq., Dip.Hort.

(c) Stobo Japanese Water Garden by kind permission of L. R. Seymour, Esq.

5th Meeting HADRIAN'S WALL.

17th Sep. (a) Chesters Roman Fort (Cilurnum).

(b) Housesteads Roman Fort (Vercovicium). Messrs Peter Haldane and William Rutherford expertly guided the Members.

AGM

16th October Berwick Museum

EXTRA

16th August The Hirsell, Coldstream. Fungus Foray in conjunction with the Botanical Society of Edinburgh.

PROCEEDINGS
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

CAPTAIN SIR SAMUEL BROWN OF
NETHERBYRES

*being the Anniversary Address delivered by Lieutenant Colonel
Simon Furness, President of the Club, on Thursday,
16th October, 1986*

Samuel Brown was born the eldest son of William Brown of Borland, Galloway, in London in 1776. At the age of nineteen he joined the Navy as an able bodied seaman in HMS Assistance, and worked his way up to acting Lieutenant, serving with distinction during the Napoleonic Wars. Returning to peaceful waters, Brown turned his mind to improving the efficiency of the Navy, taking rigging and mooring cables as a starting point. Merchant and naval vessels of the day all used hemp cable, which, for a ship like the Victory, could be twenty inches in diameter. Hemp cable had a short life due to rotting and cutting. It also took up valuable space on board ship, having to be stored in cable tiers by the most able men on board, so that it could be run out quickly without jamming. This was probably one of the tasks to which Brown was put early in his career.

In 1808 Brown formed a partnership with his cousin Samuel Lenox to manufacture chain cable, and chartered a 400 ton sailing vessel, The Penelope, at his own expense, to conduct trials of mooring and rigging cables. Brown captained the Penelope on a 4 month voyage to the West Indies. This voyage was a complete success in proving the merits of chain cable, and by 1811 chain cable were in general use on His Majesty's ships. They lasted at least 3 times as long, and took up half the storage space of hemp cables.

Brown was promoted to Commander in recognition of his work, and the Patents he took out gave him exclusive rights as the sole supplier of chain cables to the Navy. With regular naval contracts assured and merchant fleet orders coming in, Brown looked for a site to establish a purpose built chainworks. He found one at

Millwall on the Thames, convenient to Deptford Naval yard, and the India and London docks.

As the Millwall works were soon fully engaged in the production of marine chain cables, Brown decided to manufacture chainwork for other uses at Newbridge in Glamorgan, near Pontypridd. This works was established under the Brown-Lenox partnership and still exists today, although no longer as a chainworks. The last major chain cable order fulfilled by the Newbridge works was the anchor chain for the Queen Elizabeth II. It is also worth mentioning that the well known photograph of Isambard Kingdom Brunel, in his top hat, was taken against a background of Brown Lenox chains.

In addition to chain cable production, the Newbridge works also produced the major part of the chainwork for Samuel Brown's suspension bridges. Brown's innovation was for chains of flat eye bar links and pins, a design he patented in 1817. The first large suspension bridge erected by Brown still stands today—the Union Bridge over the Tweed. This was designed and constructed by Brown at a cost of £7,700 on behalf of the Berwick and North Durham Turnpike Trust. The foundation stone was laid on 2nd August, 1819, by William Molle, Chairman of the Trustees, and the bridge was opened on 26th July 1820.

Now William Molle was a grandson of William Crow of Netherbyres, his mother being one of William Crow's daughters, Elizabeth. William's only son George died intestate in 1813, and the estate passed to his nephew William Molle. It is therefore reasonable to suppose that Samuel Brown's first connection with Netherbyres was as a guest of William Molle. What would be more natural than that the Chairman of Trustees should entertain the distinguished designer of his bridge at his nearby home?

In all Brown was associated with about forty suspension bridges and piers, the most famous of the latter being the Brighton chain pier, opened in November 1823. Brown conceived the idea of building a chain pier at Brighton after constructing a similar one in Leith. During the opening, Mrs Brown joined in the celebrations and gave a ball with 'a correct representation of the pier in chalk' decorating the dance floor. The Brighton pier survived until 1896, when it was blown down in a violent storm. A portrait of Brown with the chain pier in the background is in the possession of East Sussex County Council. Brown is described as 'being of medium height, not stoutly built, had a ruddy complexion, and his hair was iron grey. Owing to some injury or defect he walks somewhat limping with the assistance of a stick'.⁽¹⁾

Mrs Brown who led the celebration to open the Brighton pier was Mary, daughter of John Home, WS of Edinburgh and they had married in 1822. Perhaps they met while Brown was building the pier at Leith. John Home, who had an office at 10, Charlotte Street, Edinburgh, was Brown's legal agent in his dealings with Nether-

byres. Later he dealt with John's son, William, who was, of course, his brother-in-law. Strangely the bridge which Brown built over the River Eye at Netherbyres was not a suspension bridge, but a tension bridge, on which the carriageway was carried on the chains, rather than being suspended from them. This survived until 1929, when it was demolished by my Father as it was by then in a dangerous state.

Brown purchased Netherbyres estate in 1833 from William Molle. The estate was deeply in debt when he bought it. Mr Joseph Gunsen of Whitehaven held notes against the estate of £17,000. Apart from continuing one of Gunsen's notes for £5000, Brown purchased the estate out of capital. By then the royalties for his monopoly supply of chain cables would have been considerable.

Brown engaged George Angus as his architect. He is described as 'a competent but eclectic architect, who adapted his style to circumstances'. He is mainly known for work on public buildings, chiefly in Dundee. ⁽²⁾

In March 1834, Angus wrote to William Home, concerning the alterations—'whether in all the circumstances of the case I would recommend the repairing and adding to the present house, to the extent of £2100, or that of an entirely new one to the extent of £2600, the plane and elevation of which to be similar and to afford the same accommodation as the alternate plan of the old. I am of the opinion that the change of situation would be the only material advantage gained for an outlay of £500, and I do not suppose although it was brought to the market that it would bring this amount of additional value in consequence of a new house; nor is this all, for were it further forward in the lawn, the site would require to be scooped out so as to afford an easy access to the main door. As the present building along with the proposed additions can be made perfectly substantial, commodious and comfortable, I would not in this case recommend any greater outlay than what is positively necessary for obtaining these objects'. ⁽³⁾

In a deed box in the Scottish Record Office there is a drawing of a square Georgian house, with two wings, each of which has a greenhouse attached in front, with a note in Brown's hand 'greenhouses separate controls'. ⁽⁴⁾

There is nothing to show in this plan whether this is the old Netherbyres house, or a possible new one, but there are also plans, with amendments and additions in Brown's writing showing alterations to the internal layout of a house with this ground plan, so it may be that this was the old house at Netherbyres. The only evidence contrary to this is an estate plan dated 1818, which shows the house as a square building without wings. There is also a detailed estimate headed 'Estimate for adding a centre part to the present wings of the house of Netherbyres'. ⁽⁵⁾ Clearly these refer to alterations to the old house. There are no plans or estimates for a

completely new house, although there are many similarities between the present house, and the embryo plans which we have. A parlour and a library were placed either side of the main entrance hall, which is the present layout, although the existing front door now opens into the old parlour. There was to be a gallery at first floor level, and over this a skylight. This would have been much smaller than that which now exists, and the stairs were hidden in separate stairwells. We do not know what brought about the decision to build a completely new house. I wonder if Mrs Brown had a hand in this and Angus did indeed adapt his style to circumstances for a client or a client's wife wanting a larger more imposing house.

On the subject of wives, as a bachelor, I do not know if it is the custom of wives to scribble notes on the bottom of their husband's business letters, but Mary Brown certainly did so. In a letter written by Brown to her brother, his lawyer, she added:

'I have delayed writing to you since the arrival of the ponies until we had been out with them in the phaeton. We had them both out in single harness in the gig and they went like lambs. Cpt. B is much pleased, as I am with them. We have two sets of double harness otherwise we would have been glad to take advantage of your offer to buy one. Our old carriage and harness we have just had repaired at Ayton, and it is quite fresh. The other we have in London'.⁽⁶⁾

Samuel Brown was knighted by Queen Victoria in 1838, being created a Knight of the Royal Hanoverian Guelphic Order. It is not clear what the knighthood was awarded specifically for, but by then he had taken out a number of patents, all of which involved the use of chains, for which he had the monopoly. These included one for 'an improvement in the means of drawing or moving carriages and other machinery along inclined planes, railways and other roads, and for drawing or propelling vessels on canals, rivers or other navigable waters.' This patent was taken out in 1841 and applied to England, Wales and the town of Berwick-upon-Tweed.⁽⁷⁾

He died at Blackheath in 1851 aged 75. He had moved south sometime before this, as we have a letter from Vanburgh Lodge, Blackheath dated 25th March, 1847, in which he mentions the possibility of conveyancing Netherbyres to Lady Brown. I suspect that he did not do so, but decided to sell the property himself. The house was advertised for sale in *The Times* of 8th January, 1850:⁽⁸⁾

'The mansion house is an elegant modern structure built by the present proprietor, fitted with hot, cold and shower baths, plentifully supplied by pipes from a high level. It is beautifully situated on the River Eye, and it is surrounded by old trees. The garden is surrounded by high brick walls and it is in full bearing.

The mansion house, offices and lodges and the garden and park walls were recently erected at a cost above £7000.'

The estate was sold to John Ramsey L' Amy, Younger, of Dunkenny, who in 1845 married Mary, daughter of William Mitchell-Innes of Ayton Castle.

So much for the house, but my main interest in the history of Netherbyres has always been to unravel the history of the garden. The reference in the advertisement to the recent erection of the garden walls must cast some doubt on the age of the present elliptical walled garden, which we have always attributed to William Crow, that man of great engineering and mathematical genius, who died in 1750. The 'oval' is clearly marked on the estate plan of 1818 by John Blackadder.⁽⁹⁾ This has a line of trees bisecting it, and trees, possibly fruit trees lining the inside of the oval. There is no indication of the height of the outside wall. The same plan shows a rectangular enclosure running north-south in front of the house at Netherbyres. This is marked as Netherbyres Garden and Orchard. In Brown's sketches for his development of the park, this garden has disappeared and a rectangle somewhat to the west has been marked as 'Garden' embodying the south facing wall of the stable block. Clearly the oval was not laid out as a garden at this time, nor was it obviously the site for one. Brown wrote: 'We should begin at once to pull down all the garden walls, and prop up the wall trees, first pruning them very close ready to transplant them in March, by which time the new garden walls will be ready'. Soon afterwards he changed his mind as he wrote: 'It has occurred to me that the best place for the garden would be the oblong park east of the oval.'

I did intend to build a wall extending from the bridge to the corner of the old road. Thus if the garden were here all that would be saved. The land is fair and could be easily drained into the river if necessary. There would be no wall wanted next the oval, only a good buck hedge'.⁽¹⁰⁾

Mr Niven his factor at Netherbyres wrote to Wm. Home looking for some guidance in Brown's absence: 'I by no means wish to contradict the Captain's wishes, but I should like very much to have it in my power to discuss the matters personally before going further. I think however he is quite right in respect to the garden not being behind the stables, but I am afraid that the field next to the road is not perhaps the best place it might be put, as it is so exposed on the east side'.⁽¹¹⁾

We don't know when Brown decided to make the oval into his formal garden, but it is certain that he did so, for the ordnance survey map of 1856 shows the garden laid out very much as it is today, except that there is a fountain in the centre of the garden. The 'estimate for forming and levelling grounds and garden about Netherbyres House' prepared for Brown reads:

	pond in centre of oval 40 by 20ft.	£1.13s.4d
Also	500 hardwood trees from Mr. Robertson @ 2/-	£50.00s.0d
	3000 shrubs & flowers of different sorts @ 4d	£50.00s.0d

Brown also gave detailed down to earth instructions about the layout of his property: 'I wish a fence to be carried along the bank of the river to keep people from trespassing'. Some of his ideas were not so practical. He thought it would be nice to have a canal round the oval. Niven wrote: 'I have taken levels of the oval with a view to making a pond round it, but I find that the south west end is 7ft 4ins higher than the north east end, and therefore I doubt whether it would do for ponds as shown on the plan and described by Captain Brown without a very great quantity of cutting and banking'.⁽¹²⁾

All this indicates that the oval was not a garden at this time, but some sort of walled enclosure, possibly containing fruit trees and used as an orchard or pleasance. Such a wall can be seen on the south and west side of the garden, where a stone wall about 3ft high has been heightened to a uniform 12ft all around the garden. The walls on the north and east sides, that is, those facing the sun, appear to be of a uniform brick, somewhat older and built all at one time. My theory is that these were William Crow's fruit walls, some 300ft long, which he mentions in a letter to Dr Alstone, Professor of Botany at Edinburgh in 1740.⁽¹³⁾ There is no doubt in my mind that Crow devised the oval, which is a perfect ellipse, complete with the external directrix. Possibly in his time it was more of a formal garden, but had deteriorated with the passing of the years since Crow's death, and the burden of debt on the estate.

My own theory is that William Crow used the idea of a round walled garden, illustrated by John Worlidge in his 'Art of Gardening' published in 1677. Worlidge says that 'the walls about such a garden are very good for fruit, the winds not being so severe against a round wall as against a straight wall'.⁽¹⁵⁾ Being a man of mathematical and engineering genius, Crow went a stage further and laid out an elliptical garden, with a fruit wall along one side of it.

Be that as it may, it is clear that the existing wall of the garden at Netherbyres was completed by Brown. Mention is made in his letters of the garden wall to be made 12ft in height, and there is a sketch showing that he wanted the coping stones to be 18 inches wide, overlapping the wall and sloping outwards. This is as we find them today.

Thus the main author of the garden, grounds and house at Netherbyres was Samuel Brown. A wing was built on to the house by Ramsey L' Amy to house his two maiden sisters. There was only one door through to their wing, and he kept the key on his side.

The garden has lost its pond, which became a fountain, and is now a mound with an ornamental urn. Sometime after 1867 the greenhouses were built. The O.S. Map of 1867 does not show them, but an advertisement in The Times of June 16th 1875, when the house was again for sale, states that: "The policies, garden vineries and greenhouses are in excellent condition".⁽¹⁵⁾ The vines and

greenhouses are still there and are therefore over 100 years old.

There is more to be found out about William Crow, and much more research could be done on the contents of the deed box of Samuel Brown's papers, but there, for the time being we will let the matter rest.

ACKNOWLEDGEMENTS

I am most grateful to Stephen K. Jones and the publishers of the "Glamorgan Historian" for allowing me to quote from his article on Samuel Brown and the Brown Lenox Chainworks.

I am indebted to Dr Thomas Day, of the Scott Sutherland School of Architecture, Aberdeen, for alerting me about the existence of the Brown papers in the Scottish Record Office, and to the SRO for permission to quote from them.

I would like to thank Dr Stella Mills for her help, advice and research into William Crow.

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- (8) The Times, 8 January 1850.
- (9) SRO TD 78/7.
- (10) Ibid.
- (11) Ibid.
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- (15) The Times 16 June 1875.

WHITEKIRK REVISITED

Hamer stands, a Heavenly sign,
Many, as the ancients tell,
Came to kneel at Mary's shrine,
Drank at Mary's holy well,
Sought, and found in their distress,
Healing or forgiveness.

Cradled in an oaken wood,
Strong the tower of Hamer stood,
Columbine and ivy wound
Wilder fancies, and the ground
Nourished life, as only where
Earth if kindly, skies are fair.

In the nights of Christmas-tide,
Hamer's ever-open doors
Saw her folk from Lothian wide
Gather, and the burning stars
Hung their symbols in the sky,
All for ships to reckon by.

So the long year, circling round,
Laid its pattern on the sea,
White sails billowing, homeward bound,
Rich with freighted industry,
And the light of sunset hour
Gilded Hamer's holy tower.

Lovelier than a symphony,
Sacred and sublime,
Shall thy name and memory be,
Down the trail of time,
So I dedicate to thee
This untutored rhyme.

This poem is printed in memory of George Baillie Hamilton, the 12th Earl of Haddington, K.T., M.C., T.D., President of the Berwickshire Naturalists' Club 1956, who died 17th April, 1986.

He was a humble, approachable and conscientious man with a great sense of the ridiculous and a deep knowledge of the Borders of whose history he and his forebears had long been a part.

The poem is taken from his book of poems 'I Love Mountains' with family permission. Ed.

GRACE AGNES ELLIOT, M.B.E.

President, 1976/1977

Grace Elliot who died on 30th June, 1986 was a Borderer born (at Birgham House) and almost a Naturalist born, for her father William Elliot, J.P., joined the Club in 1909 when she was six, and took her to meetings from an early age, as she recalled with some pride. She herself became a member in 1936 and an Honorary Life Member in 1985. Her formal education was at St Michael's School for Girls at Malton in Yorkshire, and she later qualified as a Freeman of the Worshipful Company of Spectacle-makers. However, Grace's real education went much further than that. As a small girl her uncle, the Reverend Matthew Ryle, who was an eminent lepidopterist, engaged her interest in natural history and started the collection of butterflies and moths which she maintained for the rest of her life. Her father was a great friend of Sir George Douglas, the Border historian and man of letters, and he taught her much Border lore, on which she built widely. Her enquiring mind led her into almost every feature of the Club's activities, from fossils to ferns, in fact from archaeology to zoology, as may be judged from the 17 entries covering 110 pages under her name in the Index to our History for the period 1932 to 1980. She was always ready to help with other people's problems and often came up with the answer straight away, whether it was the transcription of a seventeenth century letter or the extent to which the Cheviot area was liable to earthquakes. In consequence Grace was much in demand as a lecturer on local and Border history. Perhaps to her the summit of her work in this line was when she was called upon in 1973 to deliver the Oration during the Coldstreamer's annual pilgrimage to Flodden (her father had proposed the inscription "To the Brave of Both Nations" which is on the monument erected by the Club there). Nevertheless she found time for other things, one of which was the Guide Movement, in which she worked as a Brown Owl, a Guide Captain and eventually a District Commissioner. Her abounding energy still sufficed for such things as fishing and dressmaking. Grace has left two particular monuments. One is the Berwickshire Documents, now housed in the Library at Duns, on which she did tremendous work. The other is her reconstruction of the pottery found at Coldingham Priory, in the excavation of which she took a leading part. Her meticulous record of this, illustrated by her beautiful drawings of the finds, is, as it fully deserves, in the Royal Museum of Scotland in Queen Street, Edinburgh. It was not surprising to those who knew her that all her varied work was recognised in 1971 by her appointment as a Member of the Most Excellent Order of the British Empire, a rare distinction for a woman amateur in the fields in which she laboured.

She was a good friend.

T.D.T.

150 YEARS PLUS OF PADDOCK STOOLS

A history of agaric ecology and floristics in the
Borders of Scotland*

DR ROY WATLING Royal Botanic Garden, Edinburgh
who led the Fungus Foray, Hirsell, 16th August, 1986

By the time the founder members of the Berwickshire Naturalists' Club had first met in 1831 and those of the Botanical Society of Edinburgh had met in 1836 for their inaugural meeting, Elias Magnus Fries, the 'king' of mycology had published his *Systema Mycologicum* (1821) and Charles Hendrick Persoon, the 'prince' his *Synopsis methodica fungorum* (1801). Indeed the Edinburgh based Robert Kaye Greville had already published his *Scottish Cryptogamic Flora* (1822-28) in which amongst other species he described the montane agaric *Amanita nivalis*, a species with which Scottish agaricology has almost become synonymous.

But even before Greville's beautifully illustrated publication appeared there had been some earlier activity in the study of the Scottish larger fungi. The first record of a Scottish mushroom appeared in Sibbald's *Scotia Historia* (1684) apparently referring to an *Agaricus* sp. from Kings Park, Edinburgh. This same group of cryptogams was recorded by chroniclers in Orkney and by John Lightfoot in *Flora Scotia* (1777); indeed the third edition of Hudson's famous *Flora Anglica* (1798) relies heavily on Lightfoot's Scottish finds. Although James Edward Smith, founder of the Linnean Society of London, and Robert Brown, fellow of the Royal Society of London and librarian to Sir Joseph Banks in 1810. and keeper of botanical collections in the British Museum, both collected in Scotland no records came from the Border counties.

However, soon after the publication of Thomas Hopkirk's *Flora Glottiana* (1813) which dealt with the fungi of a well-defined area of Scotland viz. Clydesdale, George Johnston, a medical practitioner in the Borders and founder member of the Naturalists, drew up his findings. He wrote the *Flora of Berwick* (1829-31) in which he records 52 agarics in the second volume. He believed that this number only scratched the surface, and his cautionary note was borne out later for in his *The Natural History of the Eastern Borders* (1853) he listed 96 agarics and boletes. Whereas Hopkirk produced the first list for a specific area, Johnston in his 1853 publication was the first to use ecological groupings. In his work he also drew attention to the preparation of catsup from edible fungi and used the word paddockstool, spelt in the same way as Lightfoot seventy-five years earlier. Paddockstool was an early Scottish name for the Chanterelle (*Agaricus* = *Cantharellus cibarius* Fr.) but it is widely applied in its more recent spelling, puddockstool, for generally ill-favoured gill-bearing and poroid fungi.

Johnston, with the help of the Reverend Miles Joseph Berkeley, the Father of British Mycology, described many agarics, some rare and some new to science. One species included in Johnston's earlier publication was *Agaricus DuBoisii* now known to be the same as *Delicatula integrella* (Pers.:Fr.) Fayod a small, delicate white 'mushroom'. In *The Natural History* two plates are included one in colour depicting *Agaricus caperatus* executed by Johnston's wife and the other in black and white by M. J. Berkeley illustrating *Agaricus belliae* Berk. a rare fungus of marsh land. He also discussed at length in this publication the differences and misunderstanding between his *A. caperatus* (= *Phaeolepiota aurea* (Matts.:Fr.) Maire) and what others call *A. aureus*, a mix-up echoed over 100 years later by Reid (1975). *Agaricus* or as it is now called *Rozites caperata* (Pers.:Fr.) Karst., is found in the Scottish Highlands amongst *Vaccinium vitis-idaea* and *V. myrtillus* under *Pinus sylvestris*. *A. belliae* had not been seen for many years, until Orton (1960) was able to place the fungus in the genus *Mycena* based on collections found in 1956 at Surlingham, Norfolk. It was found in both Denmark and Germany during the 1930s.

But after Johnston's death agaricology in the Eastern Border lands was forgotten. However in Jedburgh, Archibald Jerdon, another correspondent of the Rev. Berkeley, was beavering away and in 1857 published in the *Phytologist*, his first account on the fungi in the neighbourhood of Jedburgh, later updated in this very journal in 1868. Present day mycologists will remember this worker by the epithet of the rather uncommon annulate mushroom called *Psathyrella jerdonii* (Berk. & Br.) Konrad & Maublanc which embodies his name. However, Jerdon added several records to the British flora based on material from the Border counties, and was astute enough to question the significance of such finds in a national context and felt records really depended on the collector and the intensity of collecting in a particular area! Jerdon published many short papers in the *Phytologist* under the general title 'Chapters on Fungi'. These contributions after a general introduction to the diversity and classification of fungi consisted of a commentary on the main divisions of this group of cryptogams (1858-63). His early training in agriculture is obviously expressed therein, although his later employment was as a collector of Inland Revenue and of Rates. Jerdon corresponded with Bloxam (as in the genus *Bloxamia*) and Currey (as in *Inocybe curreyi*) and a few letters from him to M. C. Cooke and Worthington J. Smith, two of Britain's great mycologists, still exist.

Emphasis in the study of mycology about this time shifted from the South and Central areas of Scotland to the North East through the studies of George Dickie in Aberdeen, Banff and Kincardine, Rev. J. Keith in Moray, Rev. M. L. Anderson in Menmuir, Rev. J. Ferguson in Angus, Dr F. Buchanan White in Perthshire and the Rev. J. Stevenson at Glamis. But a spark was still kept alight by the

very Rev. D. Paul who latterly paid particular interest to the fungi of Roxburgh.

In 1875 the Scottish Cryptogamic Society was founded (Noble, 1978) with Dr F. B. White as Secretary later followed by the Rev. John Stevenson well-known for his *Mycologia Scotica* (1879), a publication in which fungi were recorded for the first time in fairly natural divisions of Scotland using watersheds as boundaries; Paul was treasurer at this time. Later the last two mycologists produced a joint publication on the fungi of Inveraray (1889) and on Stevenson's retirement Paul took over in 1903 as Secretary of the Society. He had already published a series of papers on the fungi of Roxburgh (1882-90) in the pages of this journal, and was relied on by many for determinations. For example a collection of paintings of fungi by John H. Wilson and housed in the University of St Andrews have been annotated by Paul who then had his address at Fountainbridge, Edinburgh. It was quite some time later that another publication appeared on Border fungi viz. Taylor (1937) who published an account on the fungi he observed in the neighbourhood of Cockburnspath. However, despite Paul's interest in the area few cryptogamic forays were held there. This continued unfortunately even after the Society in 1935 amalgamated with the Botanical Society of Edinburgh. Forays were held in Kelso in 1884 (Anon, 1884), Selkirk in 1901, Moffat in 1911 (Anon, 1911), Peebles in 1922 and 1946 (Anon, 1923 & 1946) and it is only latterly that the Botanical Society has paid further visits to Peeblesshire viz. Glen Tress, and Dawyck in 1956, 1974, 1975 & 1981 and joint with the Scottish Wildlife Trust in 1978 & 1981.

Although the Cryptogamic Society visited the South West probably more times than the Eastern Borders that same area also lacked the attention demanded of it, and never spawned a mycological expert; five agarics appear for instance in Scott-Elliot's list of fungi for Galloway (1924). Thus the whole of the Southern area of Scotland is rather sparsely recorded. Recent calculations show that compared with the 1316, 1044 and 625 agarics and boletic recorded for Tay, Moray and Dee respectively, Tweed has 451 and the South West 404 (Watling, 1986). Local Society meetings are often a rich source of records and it is on such data that F. R. S. Balfour was able to publish over 100 names of agarics and boleti in his account in *History of Peeblesshire* Vol. 1 'from collections on various society meetings' (Balfour, 1925). But records require sound identification and it is hoped the Border area will again attract qualified mycologists in the future for there is little doubt there are rich 'pickings'. Hopefully the present catalyst is the 150th anniversary of the foundation of the Botanical Society of Edinburgh and that the foray based on Newton Stewart in May and that at Coldstream in August [1986, undertaken in conjunction with the Berwickshire Naturalists' Club. Ed] will be the beginning of a new era.

What of my own finds in the area? With an interest in arctic-

alpine agarics the author has tended to visit some of the higher areas of the Borders with interesting results. Thus the Gray Mare's Tail and White Coombe have offered *Pholiota myositis* (Fr.:Fr.) Sing., *Collybia palustris* (Peck) Smith and *Galerina paludosa* (Fr.) Kuhn. all fungi of wet boggy areas and commoner as one goes north and west, and on the peaty tops the small brightly coloured *Omphalina luteovitellina* (Pilát & Nannf.) M. Lge. (= *O. alpina* Britz.) so typical of mountains in the Cairngorms, Breadalbanes etc.

A very interesting series of communities are to be found in the grasslands around and in the willow-carrs of Blackpool and Murder Mosses. The former have a flora of sixteen or so hygrophori equivalent almost to the rich areas of the coastal north west, accompanied by a whole host of agarics with pink spores and placed in the Entolomataceae, six species of *Leptonia* alone. One of the former group from the pastures around Moffat is *Hygrophorus calyptraeformis* Berk. & Br., a striking and beautiful agaric with conical pink cap and similarly coloured stem. The wet woodland and fen are characterised by such agarics as *Hebeloma leucosarx* P. D. Orton, *H. pusillum* J. Lge, *Crepidotus luteolus* (Lamb.) Sacc. and *Naucoria salicis* P. D. Orton. One of the most exciting finds has been of the rare and very intriguing *Collybia racemosa* (Pers.:Fr.) Quelet. This tiny fungus has small processes all up the stipe each producing a head of secondary spores; it was found at Bean Rig Moss.

Characteristic of the Borders are the enormous estates with rich pastureland and woodland policies. Indeed some of the latter now have been converted, along with higher pastures, into conifer plantations. All these managed lands have their own agaric floras. Thus both Dawyck and Bowhill have attracted the eye of the mycologist, indeed Stewart Roberts has been keenly seeking out fungi in the area for many years now. One of his recent finds was Johnston's *Agaricus caperatus*, i.e. *Phaeolepiota aurea*.

As indicated earlier the Botanical Society of Edinburgh has visited Glen Tress on several occasions over the past thirty years, indeed at one meeting a small demonstration of the finds was laid out at the picnic area by kind permission of the Forestry Commission. These included *Pholiota flammans* (Fr.) Kummer and *Pleurocybella porrigens* (Pers.:Fr.) Sing. both fungi found more commonly in northern Scotland on stumps of *Pinus sylvestris* but obviously just as much at home on Spruce stumps. Others were:— the terrestrial *Hygrophorus pustulatus* (Pers.:Fr.) Fr., with black spots ornamenting the stem and *Psathyrella conopilea* (Fr.) Pearson & Dennis with its long brown spines embedded in its cap; and mushroom allies of note included the jelly hedgehog *Pseudohydnum gelatinosum* (Scop.:Fr.) Karst. A similar group of fungi have been found in the forests of Dumfries & Galloway, eg. Forest of Ae, which the author visited in connection with the forthcoming Sitka Spruce Symposium. *Ischnoderma resinosum* (Schrad.:Fr.) Karst., a rather infrequently seen polypore has also been found at Moffat. About

100 different mushrooms and allies can be found on a single foray in such a community.

Of the smaller agarics *Mycena oortiana* Hora with its smell of iodoform is common on twigs but surprisingly rarely recognised, *M. citrinomarginata* Gillet with yellow gill-margin, *M. tenerrima* (Berk.) Sacc. with its cap as if dusted with sugar, and *M. longiseta* von Hohnel with hairs in the cap resembling splinters of glass have all been found. Other small taxa are the fishy smelling *Macrocystidia cucumis* (Pers.:Fr.) Heim which some people describe as with the odour of cucumbers, *Marasmius hudsonii* (Pers.:Fr.) Fr. confined to old holly leaves but with a cap adorned with long black hairs and *Omphalina wynniae* (Berk. & Br.) Orton of a beautiful chartreuse colour, growing on rotten wood. The last two species have been recorded from Dawyck. *Pholiota scamba* (Fr.:Fr.) Moser grows scattered amongst needles and twigs in Glen Tress, and other similar conifer forests.

Amongst the moss at Dawyck the cryptic-coloured, grey *Leptoglossum muscigenum* (Fr.) Karst. has been found, as it has at Thornhill, and Blackpool Moss, and at Bowhill the interesting but insignificant *Flammulaster subincarnata* (Joss. & Kuhn.) Watl. was an interesting find.

The larger mushrooms and toadstools include: true mushrooms *Agaricus sylvaticus* Schaeff. ex Secr. and *Ag. variegans* F. H. Moeller at Glen Tress and *Ag. semotus* Fr. and *Ag. placomyces* Peck at Bowhill; *Hygrophorus agathosmus* (Fr.:Secr.) Fr. with its smell of bitter almonds, from both Moffat and Glen Tress; the majestic sticky capped, purple-staining *Cortinarius purpurascens* Fr. from Moffat; *Phylloporus rhodoxanthus* (Schw.) Bres. with bright yellow gills but general appearance of a bolete and *Inocybe pudica* Kuhn., which reddens immediately if handled or damaged. Also the bolete *Leccinum variicolor* Watl., only recently described from Mull, is found in the wet birch woods of the Borders. There is, in addition a whole range of members of the Russulaceae, in both the genus *Russula*, and the milk-caps *Lactarius*, eg. the white *R. albo-nigra* Krbh. which turns black on handling, and *R. farinipes* Rom. with a farinaceous powdered stem; and the very hot tasting *Lactarius blennius* Fr. with oily spots on the cap rim, and the pale pinkish brown *L. pallidus* Pers.:Fr. both found under beech, and *L. pyrogalus* – pyro fire; galus milk!

On twigs, branches and other woody debris of conifers *Panellus mitis* (Pers.:Fr.) Singer grows in swarms of small fruiting bodies and the aniseed smelling *Lentinellus cochleatus* (Pers.:Fr.) Karst. forms characteristic leather brown, horn-like structures on old stumps. Also on stumps is *Ptychogaster albus* Corda, the asexual stage of a polypore, which although thought generally to be rare is very very common in the Borders. Its fruiting body breaks up into a powdery mass similar to some of the larger slime-moulds. In contrast on old leaves *Mycena pelianthina* (Fr.) Quel. surprisingly has been found at

Dawyck for in continental Europe it is restricted to the beech zone; perhaps at Dawyck it has been introduced with the exotic plantings there. *Collybia confluens* (Pers.:Fr.) Kummer is on the other hand widespread in Europe and in Scotland it ranges from mature woodland to creeping willow stands; it smells of unopened, damp rooms.

Some of the very exciting records of mushroom-allies from the Borders are: *Trogia* or *Plicaturiopsis crispa* (Fr.) Reid at one time classified with the chantarelle despite its lignicolous habit, *Aleurodiscus amorphus* (Fr.) Schroet., a fungus studied and illustrated by Beatrix Potter the author of so many children's stories (Noble & Watling, 1986), *Platyglœa peniophorae* Bourd. & Galz. parasitising the fungus *Hypoderma praetermissum* (Karst.) Erik. & Strid which itself only looks like a streak of paint on wood, and *Tremella encephala* Pers., a jelly fungus. In addition *T. foliacea* Pers., found in Scotland on both conifers and hardwoods, is known from South Park Wood, Peebles on *Sorbus aucuparia*, the mountain ash.

One interesting stomach fungus (Gasteromycetes) which has been collected is the dog stinkhorn (*Mutinus caninus* (Huds.:Pers.) Fr.) but generally on forays in the Borders only the common widespread taxa are found. The finding at Haddington of the truffle *Tuber aestivum* Vitt. has been given much publicity recently (see the Observer newspaper and supplements) but it is an ascomycete and although it may grow to the size of a small potato it is related to the morels and even the blue-mould of choice cheeses. The false truffles, as they are known, are basidiomycetes and related to the puff-balls and earth-balls, forming a distinct group within the Gasteromycetes. Very recently *Hymenogaster albus* (Klotzsch) Berk. & Br. and *Hydnangium carneum* Wallr., both members of this group, have been found under eucalypts at Logan Botanic Garden, undoubtedly introduced to the south west from abroad. The rich plantings of exotics in the Borders should support similar fungi and truffling there would be rewarding I am sure. One early record of *Melanogaster albus* (Vitt.) Tul., a false truffle rare in northern British Isles, comes from Tweed, viz. Jedburgh, its only Scottish site. Earth-stars, *Geastrum* spp., can be expected in the eastern Border counties as they are well represented in the old county of Haddingtonshire.

Further details of all these finds and many more, and of many microscopic fungi collected in the Borders can be found in the archives of the Botanical Society of Edinburgh housed at the Royal Botanic Garden, Edinburgh. In these same archives there are some of Johnston's notes and in the herbarium at the Royal Botanic Garden several of his specimens.

* Adapted from the Presidential address to the Botanical Society of Edinburgh on the occasion of its sesquicentennial celebrations.

* At the same site the rare truffle *Balsamia platyspora* Berk. & Br. was also found indubitably the most northerly record for this species in the British Isles.

15 AUGUST 1986, HIRSEL, COLDSTREAM

Agaricus arvensis	margin of path E
A. campestris	margin of path E
A. langei	mixed woodland C
Agrocybe praecox	B
Amanita vaginata	mixed woodland C & D
Armillaria sp.	(poss. <i>A. bulbosa</i> - only bootlaces present on <i>Quercus</i>) C
Bolbitius vitellinus	margin of path A
Boletus chrysenteron	under <i>Quercus</i> D
B. porosporus	2 collections under <i>Fagus</i> D
Collybia confluens	under <i>Quercus</i> C
C. dryophila	widespread in groups throughout property B-E
Coprinus lagopus	widespread in groups throughout property B-E
C. micaceus	on old stump B
C. plicatilis	widespread margin of wood B-D
Conocybe appendiculata	wood margin C
C. rugosa	wood margin C
C. subovalis	on grass remains E
Laccaria laccata	widespread margin of wood B-D
Lactarius britannicus	several localities under <i>Quercus</i> C
L. quietus	under <i>Quercus</i> C
L. rubrocinctus	under <i>Quercus</i> C
L. seriffuus	under <i>Quercus</i> B
Marasmius oreades	part-ring by roadside A
Mycena galericulata	old stump C
M. speirca	on twigs, margin of loch B
M. vitilis	margin of loch etc. woodland margin B-C
Psathyrella gracilis	margin of loch B
P. pennata	burnt path under <i>Quercus</i> C
Russula atropurpurea	under <i>Quercus</i> C
R. censobrina	mixed area C
R. cyanoxantha	under <i>Quercus</i> C
R. farinipes	mixed area C
R. heterophylla	under <i>Quercus</i> D
R. laurocerasi	under <i>Quercus</i> C
R. puellaris	under <i>Quercus</i> C
R. vesca	under <i>Quercus</i> D
Tricholoma ionides	field edge B
Tubaria conspersa	under <i>Urtica</i> , <i>Circaea</i> etc. C
Polyporales	
Clavulina cristata	bare-ground C
Heterobasidion annosum	killing <i>Pinus</i> C
Inonotus radiatus	on <i>Corylus</i> C
Inonotus sp.	on <i>Quercus</i> C
Laetiporus sulphureus	on <i>Quercus</i> B
Meripilus giganteus	on old stump <i>Fagus</i> ? E
Phellinus f. punctatus	on <i>Corylus</i> C
Stereum hirsutum	on <i>Quercus</i> B & D
S. rugosum	on <i>Corylus</i> C
Exidia glandulosa	on <i>Quercus</i> C
Gasteromycetales	
Lycoperdon perlatum	pathside, under trees C
Scleroderma verrucosum	pathside D
Uredinales	
Coleosporium tussilaginis	on <i>Tussilago</i> C
Melampsora allii-fragilis	on <i>Salix fragilis</i> giving shoot death A
Ascomycetes	
Bulgaria inquinans	on <i>Quercus</i> C

Diatrypella quercina	on <i>Quercus</i> C
Epichloe typhina	choke-grass B
Erysiphe circaeae	on <i>Circaea lutetiana</i>
E. heraclei	on <i>Heracleum sphondylium</i> C
E. graminis	on <i>Arrhenatherum</i> A
Hypoxylon fuscum	on <i>Corylus</i> C
Mollisia cinerea	on twig C
Mycosphaerella rumicis	on <i>Rumex</i> A
Deuteromycetes	
Gloeosporium rhododendri	B On <i>Rhododendron</i> leaves B-E

LETTERS REFER TO ESTATE AREAS

- A Road verges > lochside track
 B Lochside track to Arboretum (north)
 C ditto. (west)
 D Dundock Wood
 E Track > Museum

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WILLIAM CROW

William Crow (c. 1704-1750) succeeded to the property of Netherbyres while still a minor. His tombstone in the churchyard of Coldingham Priory (recently restored by the generosity of Lt. Colonel Furness) which was erected by 'his deeply affected wife Margaret Allan' speaks of him in glowing (Latin) terms which being translated read:

(‘Here is buried William Crow Netherbyres, Esquire, who, alike in acquiring and cultivating every science worthy of an ingenious man, exalted by a most noble genius which he assiduously exercised beyond others. By music, mechanics, the culture of letters and skill in these and other cognate arts, combined with thorough integrity and elegant manners, he became known and was deservedly dear to not a few of the chief men of the state and of literature. Sparingly cultivating the friendship of the great, he rather showed himself to be the friend of the human race. He always cheerfully devoted himself to the benefit of his acquaintances of the whole neighbourhood, by prudent counsel and by indefatigable exertion, he spent his life on his paternal estate, wisely administering his moderate means and at the same time elegantly enjoying them. He was a despiser of lucre, and a most ardent friend of liberty. Superior to ambition, whilst he eager gave himself to every noble study not considering his own health or strength, in the mid-time of his days, seized with palsy, he was suddenly cut off.

This is taken from the paper by Dr Stella Mills entitled ‘William Crow of Netherbyres a Sketch of his Life & Work’; the following letter being furnished by Lt. Colonel Furness of Netherbyres from the Scottish Record Office.

From Mr. Crow.

On ye Effects of Cold on Plants

Dr. Alstone, Professor Botany at Edinburgh

To be left at the gardener's house of the physick garden in the Abbey near the Water gate.

Dear Sir,

Tho' I have been long in disuse of my old favourite study, Botany, yet my passion for it still remaining, I have often wished to have had some correspondence with you, upon this most entertaining part of natural philosophy; and tho' I should rather have chosen to have answered a letter from you (especially if it were in my power to be any way Serviceable) yet I shall for once venture to be the aggressor, and trouble you with the present situation of my gardens, which you may believe is not very cheerful.

I deal only in the hardy flowering shrubs, and yet they have suffered extremely by the long intense frost; the Lauristinus has lost all its leaves, the pomegranate, Bignonia, and althea frutex seem to be quite dead and my Glastonbury thorn and even the Mezerion have forgot to flower in their usual season; and the best of all flowering shrubs, my peaches (of which I have a wall 300 feet long) have lost the greatest part of their small wood. Now although this has been the severest winter that ever I remember, yet I don't blame it altogether for the above disasters, but rather impute them to the terrible blasting north winds, which raged a fortnight together in April last, and hardly left anything green in my garden, or in the neighbouring fields; so that the very nettles and other hardly plants became as black as ink. Since that time my trees and plants have been in a sickly condition, and this severe frost has only given them the finishing blow. I should be glad to know what you suffered by these blasting winds, and your opinion of this blighting quality:—

The gardeners are surely in the wrong when they talk of wild fire and scorching of the leaves and sprouts of plants in a morning after a cold north air. Indeed the effects of excessive heat and cold upon both plants and animals is somewhat resembling but as far as I have observed, a blight seems to be only the effect of a sudden cold wind, which immediately congeals the juices in the capillary vessels of the tender sprouts and blossoms of plants, upon which follows a sudden mortification, and a tree seems to lose its leaves and tender buds, after the same manner that people in Lapland and Nova Zembla have sometimes lost their noses or finger ends; yet in my particular situation, which is close upon the German Ocean, I suspect that the sharp pointed saline particles, that accompany these north winds, by piercing and tearing the tender vessels, contribute a great deal to the afore said mortification, or blight; for I observed that in April last the tender branches of forrest trees in my wilderness, were sensibly salt to the taste, and that the destructive north winds did less harm in proportion as the places were distant from the sea coast; I had likewise a letter from a Gentleman near Glasgow, about that time, who informed me that tho' the north winds were very high there, yet they did not blast the last blossom of any of his trees. I happened to prune two or three of my peach trees in November last, and find that they have suffered much less damage from the frost, than those which were not plyd close to the walls, from which it seems adviseable to give the tenderest wall trees a rough dressing at Martinmass, tho' it should be again corrected at the Spring.

I shall now give you two or three accidental experiments that have occurred to me during the frost, hoping you'll send me some more curious of your own, which no doubt you have made on purpose. There was a barrel of small beer that happened to freeze in my outer cellar; I caused to draw it off and it ran about half the

quantity, which was extremely fine, and a good deal stronger than the first of that brewing; I caused thaw the ice in the barrel, but the Solution was altogether insipid. At night I set a tea Saucer full of brandy on the outside of a north window, and next morning it was frozen into solid ice; The solution of this had an aserb disagreeable taste, but nothing spirituous, neither would it flame in the fire: from these observations it seems that congelation annuls the effects of fermentation, and that the spirit in the small beer fled from the ice (as from an enemy) and lodged itself in the centre of the barrel. If I had been in an humour for trying each experiment, I would have enquired accurately whether the brandy lost any part of its weight by freezing; for it may be a question whether the inflammable spirit evaporated, or whether the congelation returned it to its original mass, such as it was before fermentation.

I try'd to thaw some lemmons (which were very hard frozen) among cold water; they very soon acquired a strong crust of ice, and when that was taken off, the fruit remained perfectly sound, and full of good juice; I try'd the same experiment upon potatoes, but without success, for tho' they acquired the icy crust below water, which extracted the frost out of them, yet it had so intimately disordered their whole substance, that they soon turned all to a watery pulp, and became quite useless; so that I have lost 7 or 8 bushels of seed potatoes for good and all—

I hope you will be so kind as to let me hear from you with your leisure. There are two of the plants *Indigena*, which grow on our sea coast, and which I have adopted into my garden, where they make no ignoble figure, viz, *papaver corniculatum luteum*,⁽¹⁾ and *im-peratocia affinis umbellifera, maritima Scotica*.⁽²⁾ If you happen not to have these, or any other that grow here about, in your collection, let me know and I shall send them next month, and wherein I can possibly serve you in any respect, pray do me the favour to command.

Dear Sir
your most obedient humble Servant
William Crow

Netherbyres Febr 9th
1740

When you write to me direct for
Mr. Crow of Netherbyres by Berwick

Identified by Professor Douglas Henderson, The Queens Botanist in Scotland as (1) *Glaucum flavum*, the Horned Poppy and (2) *Ligusticum Scoticum*, Scotch Lovage.

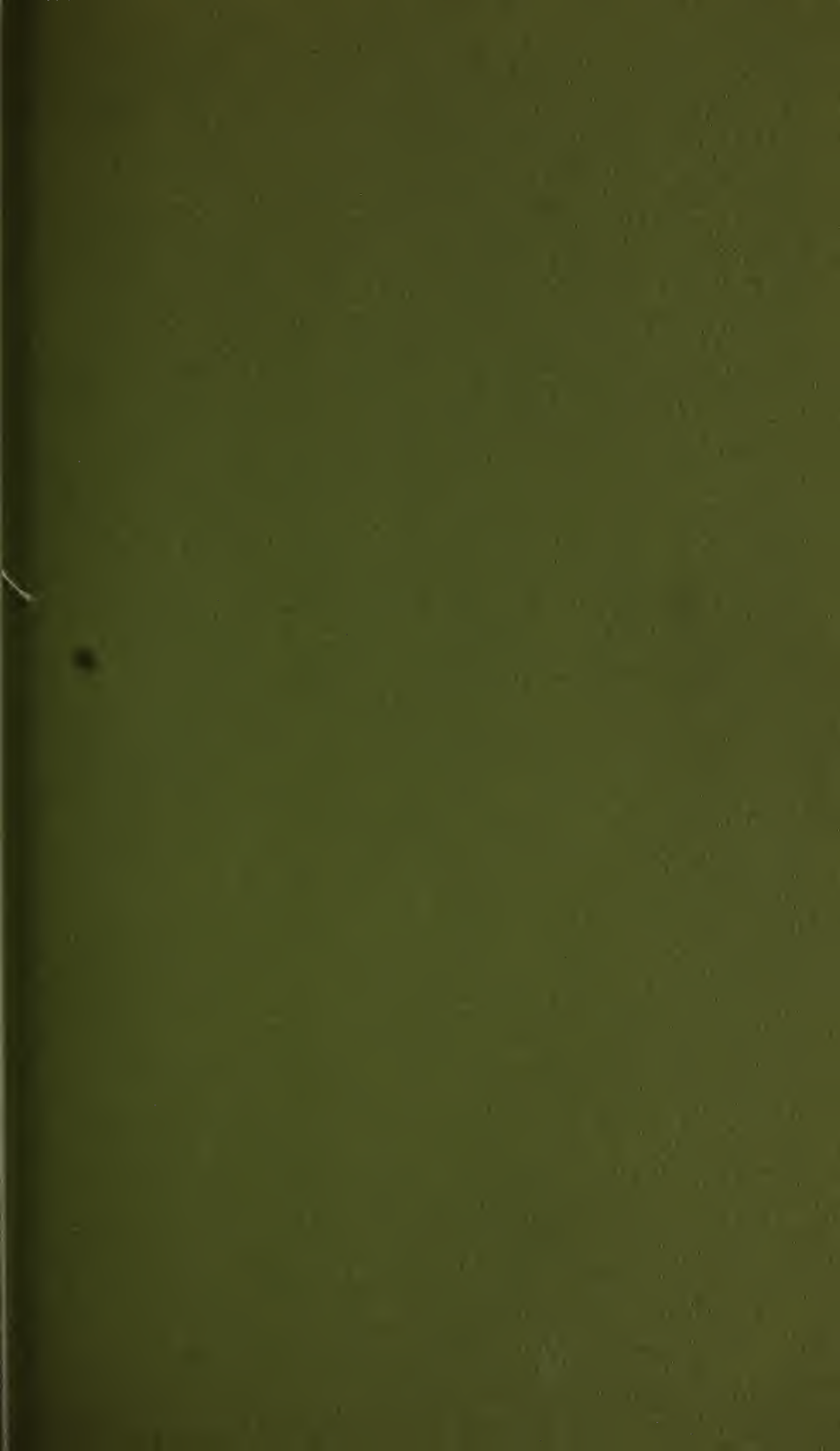
TREASURER'S FINANCIAL STATEMENT FOR YEAR ENDED 20th SEPTEMBER, 1986

INCOME		EXPENDITURE	
Balance in Bank at 21/9/85.....	£7.65	Printing	£1511.84
<i>Subscriptions</i>		Printers' Postages	245.45
Annual, Junior and Libraries	1690.50	<i>Subscriptions Paid</i>	
Entrance Fees and Badges	80.50	Council for Archaeology Scotland	8.46
<i>Sundries</i>		Association for the Protection of	
Visitors' Fees	42.00	Rural Scotland	10.00
Donations	26.25	Berwickshire Council of Social	
Arrears of 1984/85 Subs collected	5.00	Service	4.00
Sale of Club Ties and Badges	19.50	<i>Sundries</i>	
Refund of 1984/85 Income Tax	152.62	Refund of Subs overpaid	65.00
Subs paid twice (refunded)	65.00	Berwickshire Council of Social	
Transferred from Deposit Account...	1330.00	Services, for duplicating 1984/85	
		Accounts	3.83
		Library Insurance	26.39
		Hall Charges	11.20
		<i>Officials' Expenses</i>	
		T. D. Thomson, Editing Secretary .	12.40
		Mr & Mrs D. Mackenzie Robertson	
		Joint Field Secretaries	474.45
		Miss S. G. Stoddart, Treasurer	38.13
		Transferred to Deposit Account	1000.00
		Balance in Bank at 20/9/86.....	7.87
			<hr/>
			£3419.02
			<hr/>

Balance on Current Account at 21/9/86 £7.87

Balance on Savings Account at 21/9/86 £1811.77

Balance on Savings Account for Barbara Fleming Memorial Fund £260.00



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